
The Army in India

And its Evolution



1924

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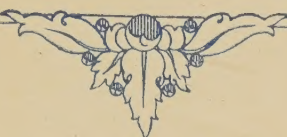
The Army in India

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The Army in India and its Evolution



INCLUDING AN ACCOUNT OF THE
ESTABLISHMENT OF THE ROYAL AIR FORCE
IN INDIA

CALCUTTA : SUPERINTENDENT
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1924

SOURCES.

History of the Sepoy War (Kaye).

The Presidential Armies of India (Rivett-Carnac).

The Indian Army—A Sketch of its History and
Organization (Collen).

The Army Book of the British Empire.

Official despatches.

PREFATORY NOTE.

The principal purpose of this book is to provide a contemporary account of the measures of reorganization carried out in the Army in India after the Great War of 1914-18, and to describe, in a connected form, the essential features of the army as thus reconstructed. The opportunity has been taken of reviewing broadly at the same time the evolution of the Army in India from its first beginnings, the object being to indicate the chain of causation which ultimately produced the after-war reforms, and also to preserve, in a convenient relation, a record of the military institutions which served India before the war, and which have been so greatly altered by the after-war reforms that they may soon stand in danger of being forgotten. The book is intended for the information of the general public and also for the use of military officers in connection with their promotion examinations. It is intended, so far as possible, to be purely a statement of facts. It has been compiled officially and is issued with the authority of the Government of India whose approval, however, must not be taken as extending explicitly to every statement or expression of opinion which the book contains.

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Part I
Introductory & General



Chapter I—Historical Retrospect.

THE Army in India is composed of individuals who have voluntarily undertaken military service, and its principal sub-divisions are fighting troops; ancillary and administrative services and departments; and followers. At the present day it comprises the following troops serving in India:—

- (a) The regular British forces.
- (b) The regular Indian forces.
- (c) The Auxiliary Force.
- (d) The Indian Territorial Force.
- (e) The Indian Army Reserve.
- (f) The Indian State Forces, when placed at the disposal of the Government of India.

This is the Army in India as it is known to-day, but it is only in recent times that the categories above enumerated have been completed and their several designations have crystallised. The Auxiliary Force and the Indian Territorial Force were established in 1920. No organized Indian Army Reserve was formed till 1887. The adjectives "British" and "Indian" which differentiate the two main branches of the army have been habitually used only in recent years. Even the term "Army in India" itself—though employed loosely from 1875 onwards—only became a stereotyped and officially recognized title after 1903; and in describing the creation and evolution of the Army in India the term is intended to denote broadly the body of troops in India serving under the British Crown. It has with one unimportant and ephemeral exception been a voluntary army at all times.*

A historical retrospect may be conveniently divided into the following periods:—

First Period.—The initial phase 1600-1708 A.D. when the forces of the East India Company were isolated and unorganized entities.

*During the Great War of 1914-18 the Indian Defence Force was on a compulsory basis, *vide* Chapter XVII.

Second Period.—The Presidency Armies under the Company 1709-1857.

Third Period.—The Presidency Armies under the British Crown, 1858-1894.

Fourth Period.—The period of union, after the abolition of the Presidency Armies, 1895-1920.

Fifth period.—The period of consolidation, 1921 to the present day.

The first period, 1600—1708

On the 31st December 1600 Queen Elizabeth granted a charter to a certain association of commercial gentlemen, which styled itself

1600-13.—The origin of the Bombay Presidency.

“The Company of Merchants of London trading unto the East Indies.” On the 11th January 1613 the Mogul Emperor’s firman to establish a factory at Surat was delivered to Captain Best, the Company’s representative. This was the first appearance of the British in India and is the origin of the Bombay Presidency.

1625-40.—The origin of the Madras Presidency.

Soon after, in 1625 a trading centre was established at Masulipatam, and later was removed to Armegaon on the same coast,

where the Company erected fortifications. But in 1640 the Company made a great stride in acquiring on very favourable terms the concession of Madras, which became the first independent position of the British in India. Permission was obtained to build a fort, which exists to this day as Fort St. George and was the origin of the Madras Presidency. In 1634,

1634.—The origin of the Bengal Presidency.

by a firman of the Emperor Shah Jehan, permission was given to the Company to establish factories in Bengal with a fort at Piplee.

There is no difficulty in thus ascertaining the beginnings of the great presidencies. It is a harder task to identify the initial stages of the armies which were to be so long and so intimately associated with them. From the first it was necessary to enrol guards for the protection of the several factories of the Company. These guards consisted of small bodies of ill-disciplined Europeans and badly armed native peons, whom we should now regard more as a corps of chowkidars than as soldiers. The purpose of their existence was not only to safeguard the walls of the factories and the valuable

merchandise which they surrounded, but also to enhance, by their presence, the dignity of the Company's local officials.

The earliest force which can be seriously regarded as the embryo of the Army in India originated in Bombay. In 1662 the island of Bombay became the property of King Charles II, ceded to him by the Crown of Portugal as a portion of the marriage settlement of his Queen, Catherine of Braganza. A detachment of King's troops, subsequently augmented by a few Europeans of various nationalities collected locally, was its garrison. But to the impecunious King the maintenance of this property soon proved burdensome. The cost was excessive, the resulting profits little or nothing. Moreover the relations between Sir Gervase Lucas the Governor of the island, and the Company's representative at Surat became strained. The former, as an officer of the King, claimed precedence over the latter, the Company's President. The violent disputes, which were thus combined with the poor financial prospects of his property, induced King Charles to offer the island of Bombay to the Company.

The Company accepted the offer. The island was handed over on the 27th March 1668 on a yearly rental of £10 in gold, and was placed under the jurisdiction of the Company's President who resided at Surat, while a deputy governor was appointed to reside in Bombay. At the same time the King's troops were offered service under the Company. They were to retain their rank and pay—those who declined being granted free passages to England. It is reported that the offer was generally accepted, and thus King's troops were converted from the service of the Crown to the service of the Company: a procedure which was exactly reversed 190 years later, when the Company's European forces were converted to the service of the Crown after the great mutiny of 1857.

The garrison of Bombay, after control had been assumed by the Company, was slightly reduced from its former establishment. Besides 2 gunners and their 21 pieces of cannon, the garrison now consisted of 5 officers, 139 non-commissioned officers and men, and 54 Topasses. All were Europeans except the 54 Topasses, who were half-castes claiming descent from the Portuguese and were so called, no doubt, from the form of the headgear which they affected. As there were no troops at Surat, the head-quarters of the Agency, we may assume that the small body of troops described above formed the nucleus of the Bombay Army. Indeed it may

he said that this was the origin also of the Army in India, because at that time the troops located in Madras and Bengal were a negligible quantity. In Bengal the forces were limited to an ensign and 30 European soldiers—the equivalent to the traditional corporal's guard of the British Empire.

Certain increases were made in the Company's forces, notably in 1683 when the Bombay garrison was supplemented by the enrolment of 2 companies of Rajputs. Each company consisted of 100 men, commanded by their own Rajput officers; and this small force may be regarded as the first beginnings of the Indian Army.

But the closing years of the 17th century were marked by various economies and reductions which financial stringency appeared to necessitate. In 1678 the rank and allowances of the President and Council at Surat and of the Deputy Governor of Bombay were diminished, the garrison was slightly reduced, and the extra allowance (batta) granted to the 30 men, who were then detailed as guard at the Surat factory, was discontinued. In 1692, on his arrival in Madras as the first Commissary and supervisor over all the Company's affairs in India, Captain, afterwards Sir John, Goldesborough ordered that the 2 companies of the garrison, hitherto commanded by Lieutenants, should in future be commanded by Captains, in the persons respectively of the Governor himself and his first member of Council. To ensure, however, that economy should be duly observed it was laid down that the 2 Captains should receive no pay of their appointments during peace! Not long after Captain Goldesborough sanctioned a force of 100 Europeans for Mr. Charnock, the Agent in Bengal, but on proceeding to Chatтанутtee on a tour of inspection in 1694 he peremptorily ordered the establishment to be reduced to 2 serjeants, 2 corporals and 20 privates.

In 1696, however, the agent, Mr. Charles Eyre, once more applied to the local Nawab for permission to fortify his factory at Chatтанутtee. He was given permission to defend himself, and Fort William was constructed, and remained, for 200 years, the seat of the Government and the Headquarters of the Army in India.

In 1698, a new Company of Merchants received its charter. It was known as the English Company, in contradistinction to the old or London Company, and its officers were accorded special privileges. The two Companies became bitter rivals, but in 1702 a partial amalgamation was effected; and in

The building of Fort William, 1696.

The East India Company and the formal constitution of the three Presidencies.

1708 they were united under the title of the "United Company of Merchants of England trading to the East Indies," known to history as the East India Company.

One of the first measures taken by the United Company was the definite formation of the three Presidencies, each distinct from the others, and each absolute within its own limits. The President of each, who was also Commander-in-Chief of the military forces of the Presidency, was to be responsible only to the Directors at home. As a natural corollary the armies of the three Presidencies became as distinct and separate from each other as the Presidencies to which they belonged, and the Presidency Army system was firmly established. It must be admitted that, in those days, this was the only feasible system.

It will be convenient to summarize the advance made during this period in the evolution of the Army in India. In the course of nearly 100 years the association of Merchant Adventurers had succeeded in establishing their trade in India, under the protection of the three chief fortified positions—the island of Bombay, Fort St. George and Fort William at Calcutta. After various vicissitudes, during which the previous agencies of the Company had in turn attained and lost not only the dignity of a Presidency but also the precedence over its fellows, the three Presidencies had been definitely established. They were independent of each other, answerable only to the court of directors at home and with full sovereign rights within their own spheres, including the organization and disposal of their military forces, which had now progressed from a mere unorganized handful of miscellaneous and ill-disciplined Europeans to a force consisting of small but organized military units. The Army in India of those days was composed of Europeans recruited from England or collected locally, of half-caste Goanese Topasses and of Indian sepoys. The latter were mainly armed with their own native weapons, wore their own native dress and were commanded by their own native officers.

The second period.

At the beginning of this period the numerical strength of the Presidency Armies was not great enough to tempt the Directors of the Company to undertake any rash adventure likely to embroil the Company's local servants with the neighbouring native

**The Presidency armies
under the Company,
1709—1857.**

rulers. The Company of Merchants was in fact what its name implied, and was no more desirous than capable of adopting an aggressive policy. But circumstances beyond the control of the Board of Directors were destined soon to convert its members from the managers of a commercial concern into the organizers of conquest. By 1741, the Bombay Army was progressing towards a higher establishment than had hitherto existed; for, besides some 700 so-called sepoys who appear to have been employed in attending the civil servants of the Company in the capacity of peons or chaprassis, we find a record of the existence of a regular regiment (*i.e.*, battalion) in the garrison of the Castle. This regiment was composed as follows:—

B. Os.	W. and N. C. Os.	Rank and File.	Followers.
1 Captain.	2 Serjt. Majs.	26 Drummers	27 Servants.
9 Lieutenants.	82 Serjeants.	319 European Privates.	
15 Ensigns.	82 Corporals.	931 Topasses and half-castes.	
1 Surgeon.			
26	166	1,276	27

In addition there were 2 native paymasters, 1 interpreter and 1 armourer, who were probably civilians as their rank is not mentioned. This regiment consisted of 7 companies.

In 1748, the Board of Directors decided to reorganize the artillery on the lines of the European system. The artillery had an indefinite origin, and at first it is probable that the guns, and almost certainly that the expert gunners, were provided by the Company's ships. At Armegaon factory, in 1628, the artillery consisted of 12 pieces of cannon and 28 soldiers who were probably infantry soldiers trained to work the guns in case of emergency. In Bombay Castle in 1668-1670 there were 21 cannon and 2 gunners, who, we must presume, were experts to supervize the amateurs drawn from the infantry. In 1711 the garrison of Fort St. George included a detachment known as the "gunners' crew" or "the gunner and his crew," which consisted of some 20 Europeans to work the guns. In 1742, when Bengal was invaded by the Mahrattas and Hoogli had been sacked, the gunner and his crew were reinforced by lascars. Even as late as 1769, after its reorgani-

zation, the artillery was still dependent on the fleet for some of its personnel. It appears that the officers and men provided by the fleet for this purpose were not always expert artillerists and that frequently the fleet only detailed men if it could conveniently dispense with their services. The fact that the Army in India still retains certain designations traceable to a marine origin is probably attributable to its early connection with the Company's ships. It may be remarked that the practice of training infantry to man guns in certain forts in India prevailed well into the present century.

By 1748, however, the Board of Directors realized that the "gunner and his crew" was an unsuitable organization. They accordingly issued orders to the three Presidencies that each was to maintain one company of artillery with the following establishment:—

<i>British Officers.</i>	<i>British Rank and File.</i>
1 Second Captain.	4 Sergeant bombardiers.
1 Captain Lieutenant.	4 Corporal bombardiers.
1 1st Lieutenant.	2 Drummers.
1 Fireworker.	100 Gunners.
1 2nd Fireworker.	
—	—
5	110

They also appointed a captain and engineer to command all three artillery companies. This is the first C. R. A. in India of whom we have record, and his appointment was certainly an advance in organization. He was permitted to reside wherever he chose, but one cannot suppose that, with the inefficiency or entire absence of communications which were characteristic of the India of those days, his command can have been very effective. Perhaps he was only intended to be an inspector-general or technical adviser. Clearly he must have been answerable to the Board of Directors alone, and one wonders whether the Presidency authorities regarded his appointment as an infringement of the prescriptive rights over their armies which they had gained 40 years before.

If this were so, the susceptibilities of the Presidency authorities must have received another shock when, in the same year, Major Stringer Lawrence, "the father of the Indian Army," arrived at Fort St. David and took up his appointment of Commander-in-Chief of all the Company's forces in India. From the moment that the post of Commander-in-Chief in India was instituted the

1748.—Institution of the Commander-in-Chief.

Presidency armies began to improve their organization; and this appointment constitutes the first link in the long chain of the consolidation of the Indian Army, of which the last link was not forged till 1922.

Promotion in the armies was ordered to be by seniority, and this rule could not be departed from unless expressly sanctioned by the Governors of the respective Presidencies. The armies of India comprized Company's troops only—European and Indian. The European infantry was still organized in separate companies, except in the Bombay army which had adopted the battalion system. The Indian troops were still little superior to an armed force of police, and they were still commanded by their own native officers, Indian gentlemen of good birth and position.

The war with France which temporarily ceased with the Peace of Aix-la-Chapelle in 1748 had brought to India on both sides larger European forces than had ever existed before in India. Neither side could afford to increase these forces from home, where all available troops were required to take part in the operations in the main theatre of war. It was clear that the contending armies in India could only be substantially augmented by the employment of larger bodies of Indian troops, whose value, although at that time undeveloped, began to be appreciated. Although the Indian sepoy of those days, through lack of discipline and proper armament, was inferior to his better organized and disciplined European comrade, it became apparent that victory would be with the side which succeeded best in raising and developing its native forces.

The war with France again broke out, and in May 1754 the Madras Government, at its wits end for troops, appealed to the Government of Bombay for help. The appeal was promptly answered, and a force of 750 men was collected and despatched. This number was made up of 3 companies of sepoys and 450 men of the Bombay European regiment, consisting of 200 British, 100 Swiss and 150 Topasses. The despatch of this detachment is not without its significance for several reasons. It proved the readiness of one Presidency to succour another in time of need, and it betrays the diminutive strength of the military forces of India in those days. It also marks the last occasion on which we shall mention the existence of the half caste Goanese soldiers known as Topasses. It is not certain when this class of man was abolished in the army, but it is

improbable that it survived much longer after this date. It formed an element in the Army in India for approximately 100 years. The charge of inefficiency, which has been levelled against the Topasses, could no doubt be substantiated, but there is no conspicuous stain of mutiny on their record.*

The year 1754 is remarkable for the arrival of the first Royal Troops in India since the time that the island of Bombay was garrisoned by Royal Troops before its cession to the Company. Among the reinforcements

1754.

which arrived at Madras under Admiral Watson was included the 39th Foot (now the 1st Battalion the Dorsetshire Regiment), which afterwards adopted the appropriate title of "Primus in Indis." Their arrival caused the application of the Mutiny Act to the Company's forces, and also introduced a new element into the Army in India, which, for more than 100 years after this date, was divided into King's troops, the Company's European troops and the Company's Indian troops.

Shortly before the battle of Plassey Clive commenced to re-organize the Indian troops under his command, by forming them into regular battalions with a small nucleus of British officers. He armed and dressed

1757.—Formation of Indian battalions.

the men in a fashion somewhat resembling that of the Europeans. The establishment of the first battalion thus organized, nick-named the "Lal Pultan"† was as follows:—

B. Os.	B. N. C. Os.	I. Os.	Indian R. and F.
1 Captam	1 Serjt. Major.	1 Commdt.	50 Havildars
2 Subalterns	Several Serjeants.	1 Adjt.	40 Naicks
		10 Subedars	20 drummers
		30 Jemadars	10 buglers
			700 sepoy's

* Their name has disappeared from the Army in India, but it is still borne by certain humble employees of the great shipping companies whose steamers ply between England and India, and the name of "Topaz" is still familiar to British officers of the army of 1923.

† The English word 'platoon' is derived from the French word 'peloton' and both, or either may be considered to be the origin of the Indian word "pultan." Shortly before the Great War of 1914-18 the British Army readopted the platoon organization and the Indian Army followed suit. The difficulty experienced by the Indian soldier of to-day in making an oral distinction between the English word 'platoon' and what he is pleased to consider the indigenous word meaning 'battalion' is as comprehensible as it is obvious—he is trying to pronounce the same word in two different ways.

making a total of 3 British officers, several British non-commissioned officers, 42 Indian officers (as we should call them now) and 820 Indian rank and file. The battalion consisted of 10 companies which included all the Indian ranks except the Indian commandant and the Indian adjutant. These two officers formed, as we should call it now, "battalion headquarters." The Indian commandant, on parade, took post with the British captain and was followed by the Indian adjutant. The British officers and non-commissioned officers formed the Staff of the battalion.

This organization is worthy of remark. It must be remembered that up to this date Indian troops, organized in companies, had been under the command of their own Indian officers. Clive had decided that the introduction of the British element was necessary, but, in making this innovation, his anxiety to adhere closely to the previous system is evident. There was still an Indian commandant, and the proportion of Indian to British officers was high. The introduction of British non-commissioned officers into Indian units is also a point to be noticed, as it remained the general rule up to the time of the Great Mutiny, and survives to this day in the Corps of Sappers and Miners.

Clive's organization was evolutionary, not revolutionary, and in analyzing it one is led to reflect that, when two such conservative races as the British and Indian combine together to form a given institution, some traces of it tend apparently to remain for many years, although the institution itself may be modified in the meanwhile. Certain features of Clive's system, have survived in the Indian army to this day.

Clive's military successes and the responsibilities which they entailed caused an augmentation of the native armies. Immediately after the battle of Plassey a second battalion was raised in Bengal. In 1759, in Madras, 6 battalions were raised on Clive's system, while in Bombay the rabble of Arabs, Abyssinians, Indian Mahomedans and Hindus, which had hitherto formed an auxiliary force to the European battalions, were organized into independent native companies in 1760 and then into native battalions in 1767. Clive's organization gradually developed, and battalions which had been supervised by a small staff of British officers but commanded by Indian commandants were converted into battalions, with British commandants and British company commanders.

The 40 years succeeding the battle of Plassey were marked by the extension of the Company's territories in every direction. The

equilibrium of military power became unstable throughout India; and the continent became a vast camp of conflicting races and warring armies. In opposition to the expressed policy of the Company's Directors at home, and even contrary to their own wishes, the force of circumstances compelled the Company's agents, in their own self-defence and in support of their own interests further to increase their armies. By 1783 the Madras Army had grown to the following establishment:—

Royal Troops.	COMPANY'S FORCES.	
	Europeans.	Native.
Infantry— 3 battalions (73rd, 78th and 101st Foot). 400 Hanoverians.	1 Regiment (1st Madras Fusiliers).	4 Regiments, Cavalry. 21 Battalions, Infantry.

At this time the officers of the Indian troops were selected from among the officers of the European regiments, and were chosen, not only for their soldierly qualities, but also from the point of view of their suitability for serving with Indian troops. With the increase in the strength of the Indian forces in all three Presidencies the British sepoy officer had become a factor of recognized importance. He had become a power in the land. The British officers of Indian units enjoyed many advantages, but, on the other hand they had no rank, with the result that they continually found themselves in positions subordinate to those of younger officers of the King's troops. The implied inferiority was resented, and it is not surprising that these officers began to assert their rights and to demand equality of treatment.

The immediate result of this agitation was the reorganization of the Company's armies which took place in 1796. At this time the European soldiers in India (King's and Company's), numbered about 13,000 while the number of Indian troops in the three presidencies was as follows:—

1796.—Reorganization of the Indian troops.

Bengal	24,000
Madras	24,000
Bombay	9,000

The reorganization reduced the strength of the native armies, but the most important changes were the great increase in the establishment of British officers in units, the creation of artillery battalions, and the formation of double battalion regiments from the independent battalions then in existence.

Previous to this reorganization the establishment of British officers in a battalion had been a commandant and adjutant besides 10 subalterns commanding companies, a total of 12. This was a great change from Clive's organization of 1758, and in the organization of 1796 the change was carried still further. Besides the Colonel commanding the regiment, each battalion was given an establishment of 1 Lieutenant-Colonel, 1 Major, 4 Captains, 11 Lieutenants and 5 Ensigns (besides 1 British Non-Commissioned officer), a total of 22 British officers.

The Indian infantry regiments were formed by linking existing battalions and amalgamating half-battalions of reduced regiments with them. Thus the new 12th Bengal Regiment consisted of two battalions, the first comprising the old 12th battalion and the right wing of the 21st, the second the old 17th battalion and the left wing of the 21st. This arrangement, of course, necessitated the renumbering of units within their armies. In selecting the units to be amalgamated, little if any regard seems to have been paid to considerations of sentiment or community of tradition.

First renumbering of Indian units.

The new organization, which was not completed till 1804, improved the prospects of the British officer. Up to this time all officers had been on a general list for promotion, and the proportion of senior to junior ranks was so low that advancement was slow. By the new arrangement cavalry and infantry officers were placed on separate lists for promotion: officers of the infantry, up to the rank of Major, were placed on regimental lists for promotion: while Colonels and Lieutenant-Colonels were placed together on lists for each Presidency. An establishment for general officers was instituted. Furlough regulations were introduced and pension rules were established.

This was all to the good. But apart from the regimental promotion of officers, the regimental system as introduced for the first time into the Indian Infantry was not wholly satisfactory. The Colonel commandant of the regiment, who had direct control over

both battalions, retained in his own hands an excessive degree of authority. His control, instead of being exercised only in matters which affected the welfare and the efficiency of the regiment as a whole, was applied to details which affected battalions individually, and battalion commanders were, therefore, deprived of the power and initiative which it was desirable that they should be required to exercise. They naturally chafed at the necessity of obtaining their superior commander's sanction in such matters as the promotion of non-commissioned officers, acceptance of recruits and the granting of leave. Moreover, the 2 battalions which formed a regiment were in reality separate units. Though theoretically linked together they had no mutual interdependence, no common bond of sentiment or interest, always excepting, of course, their common exasperation at the regimental commander's unwarranted interference in battalion affairs. It will be of interest to mark in due course the steps which were taken to avoid these defects in the regimental system of 1922.

In the light of subsequent history, however, perhaps the most remarkable feature of the reorganization of 1796 was that the Indian infantry battalions were given an establishment of 22 British officers, *i.e.*, an establishment closely approximating to that of units in the King's or Imperial forces. As a result of this, the dignity and authority of the Indian officers, which had already decreased under Clive's system, were still further diminished.

Under the reorganization of 1796, therefore, the prospects of advancement and the amenities of life of the British officer were distinctly improved; but the dignity and authority of both British and Indian officers in the Company's service were considerably impaired. These were serious defects, and it is therefore not surprising to find that the organization was not permitted to endure.

The period between the first general reorganization of 1796 and the outbreak of the Great Mutiny in 1857 has an importance, in its effect on the evolution of the Army in India, which it is difficult to exaggerate.

1797—1857.

The great acquisitions to the Company's territories, made during this period, involved the expansion of the spheres of action of the three Presidency Armies to such an exaggerated extent as to lead eventually to the abolition of those armies; and the same cause made it necessary to raise irregular corps and local contingents, some of which rendered conspicuous assistance to the forces of law and order in quelling the Great Mutiny.

THE EVOLUTION OF THE ARMY IN INDIA

By 1805, the strength of the Presidency armies themselves was approximately as follows:—

	British Troops.	Indian Troops.	TOTAL.
Bengal	7,000	57,000	64,000
Madras	11,000	53,000	64,000
Bombay	6,500	20,000	26,500
TOTAL .	24,500	130,000	154,500

Even at this early date, the Army in India was not unfamiliar with the crime of mutiny. In 1764 Bengal sepoys had mutinied for higher pay and gratuities, and European officers, in 1766, had combined together in protest against the withdrawal of batta which they considered as their due. Now a fresh crop of mutinies broke out. In 1806 there was a mutiny in the Madras Army. In 1809 European officers of the Madras Army were again guilty of mutinous conduct against Government. In 1824 Bengal troops mutinied at Barrackpore.

Early Mutinies.

By 1824, the unsatisfactory nature of the reforms of 1796 was acknowledged, and the organization which had been in force before that date was restored. The Indian infantry regiments of 2 battalions which had been formed only 30 years before, were broken up again into single battalion regiments. This of course necessitated the re-designation of the units affected, and new regiments of Indian infantry thus formed were re-numbered by Presidencies, according to the date on which they had originally been raised. One of the most conspicuous defects of the 1796 organization was, however, allowed to continue—the high proportion of British officers to Indian ranks was retained, and the establishment of regular Indian cavalry and infantry (single battalion) regiments was fixed at 23.

1824.—Further Re-organization.

Second re-numbering of units.

In 1824 the establishments of the 3 Presidency Armies of the
1824. Company were approximately as follows:—

	EUROPEAN.				INDIAN				
	Horse Arty.	Fort Arty.	Engi- neers.	Infantry.	CAVALRY.		S. and M.	Pioneers.	* Infantry.
					Regular.	Irregular.			
Bengal .	3 bdes.	5 Bns. 20 Com- panies.	47 Ofrs.	2 regts.	8 regts.	5 regts.	1 Corps.	1 Corps.	68 * Regts. (Bns.)
Madras .	2 bdes.	3 Bns. 12 Com- panies.	...	2 regts.	8 regts.	...	...	2 Bns.	52 * Regts. (Bns.)
Bombay .	4 Troops	8 Com- panies.	...	2 regts.	3 regts.	2 regts.	1 Corps.	1 Corps.	24 * Regts. (Bns.)

* Excluding local corps, e.g., Rampur battalion and Cuttack legion.

Here for the first time we find mentioned local units and irregular Cavalry regiments. With regard to the latter a short digression is necessary.

The rulers of native states, with whom the Army in India had so long been in conflict, had generally favoured the employment of large bodies of native horsemen, partially equipped and trained and scarcely disciplined, and the mounted soldier may be regarded as indigenous to, and indeed characteristic of, the country. It is curious to find, therefore, that the Company was so slow to develop the cavalry arm when such excellent raw material was readily available. Hitherto the few Indian cavalry regiments which existed had been organized on the regular basis, officered, as we have seen, on the full European scale. After the reorganization of 1796 the proportion which the Indian cavalry bore to the Indian infantry was about 8 regiments to 59 battalions, *i.e.*, in the ratio of 1 to $7\frac{1}{2}$. By 1824 this ratio had increased to 1 to $5\frac{2}{3}$. On the eve of the war of 1914-18 the ratio had risen to its maximum, namely 1 to approximately $3\frac{1}{2}$. The proportion has now (1923) fallen to 1 to $6\frac{1}{2}$, almost as low as that of 1796.

The increase in the number of Indian cavalry regiments in 1824 over that in 1796 was effected by augmenting the number of regular regiments, and by adding to them a certain number of irregular units. These latter were organized on what used to be known as the "silladar"† system, a more or less accurate copy of the system which was employed by the native rulers. As time progressed more regiments were raised on the "silladar" system. By 1921, when the silladar system was finally abolished, only 3

† For a description of the silladar system, See Chapter IX.

regiments, the remnant of the cavalry of the old Madras Army, still adhered to the European organization, which has now been adopted by all Indian cavalry units except the Governor of Bombay's body guard and the Aden Troop.

The essential difference between regular and irregular cavalry regiments did not, however, consist solely in the particular system, silladar or non-silladar, on which they were organized. Another important difference lay in the fact that in irregular corps the establishment of British officers was reduced to a minimum. By this means one of the chief defects of the 1796 organization was avoided.

From the earliest times there are examples of the employment of the units of one Presidency army in what may be regarded as the proper sphere of action of another Presidency army. But the liability was only accepted in time of war. During hostilities the sepoy was ready and indeed eager to serve in territory outside his Presidency. But when with his assistance this territory had been pacified and annexed to the territories of the company the sepoy resented the withdrawal of the field service concessions to which he had become accustomed, and insisted that these concessions were still due to him if he was called upon to serve outside his own Presidency area in what appeared to him to be foreign territory. The result was that service in the newly acquired territories was not merely unpopular, but caused serious discontent. The question as to what troops were to occupy the new territories became an embarrassing one for the Local Government to decide. Under the Presidency system it was obvious that such territory must be garrisoned by the troops of one or other of the Presidency armies—the administration of a mixed Presidency force in peace time would have presented a difficult problem. The difficulty was further complicated by the idiosyncracies of the Presidency armies themselves. The Bengal army consisted of class battalions composed of men of high caste; the units of the Madras and Bombay armies were of mixed classes of men of lower caste. In the Bengal army no provision was made in the regimental lines for the men's families, and the sepoys were accustomed to visit their families at regular intervals. In the Bombay army accommodation was provided for a certain proportion of families; in Madras, on the other hand, all the men's families accompanied the battalion wherever it moved, but the sepoys were expected to pay for the journeys of their families on relief.

The high caste men of Bengal had a serious objection to being transferred across the sea. The Madras sepoy, on the contrary, had no such objections, and this probably accounts for the fact that a large proportion of the force which took part in the 1st Burmese War consisted of the Madras army and that Burma eventually became one of the stations of the Madras army.

Bengal troops had also taken their share in the operations which resulted in the conquest of Sind by Sir Charles Napier, and when that province was annexed in 1843 it was the design of Government that units of the Bengal army should garrison it. Bengal troops, however, refused to serve there, so far from their homes, without compensatory allowances. Serious mutinies broke out in and around Ferozepore among Bengal units detailed to proceed to the hated locality, and a Madras battalion ordered in relief broke out into open mutiny in Bombay when it learned that the Sind allowances were to be discontinued. Eventually Bombay troops were sent to garrison Sind, the province became a part of the Bombay Presidency and, as a natural corollary, one of the stations of the Bombay army.

Even service in the Punjab was unpopular with the Bengal sepoys. They considered that service outside their own Presidency, even in peace, entitled them to special allowances: and the withholding of the allowances after the annexation of the Punjab was also the cause of insubordinate conduct amounting, in not a few cases, to open revolt.

Thus the Indian armies were familiar with the crime of mutiny, a familiarity which culminated with such baneful effect in 1857. It would, however, be unreasonable to impute all the disastrous events of the Great Mutiny to the Presidency system of army organization. There were many other contributory causes of which the burden of conquest, the dearth of land communications and, especially, the unrestrained efforts of revolutionaries and sedition mongers were not the least important. Nevertheless as a result of the parochial sentiment and exclusive loyalty which it fostered, and the mistaken views of vested rights and interests which it encouraged, the Presidential system must bear its full share of blame and responsibility.

To meet the difficulties involved in arranging for the occupation of newly acquired territory one of the expedients adopted was to

**Further categories of
the Army in India, 1857.**

raise local bodies of troops for a particular service in particular localities. Of these perhaps the best known are the Hyderabad

contingent and the Punjab Irregular Force which afterwards became the Punjab Frontier Force. Thus, at the end of this period we find that the Army in India comprised certain units of the British Imperial Army (King's Royal Troops), the Company's three Presidency armies, consisting of British and Indian units, and various local forces and contingents. The strength of the Army in India immediately prior to the Mutiny of 1857 is shown in Appendix I.

The third period

On the 1st November 1858, by Royal Proclamation, Queen Victoria assumed the direct Government of India and the East India Company practically ceased to exist.

The Presidency armies under the Crown, 1858—1894.

At once two problems presented themselves for solution, namely the status and organization of the European and Indian forces, respectively, of the late company. There were two alternatives to be considered in the solution of the first problem, namely whether the British forces of the Army in India should henceforth form a portion of the Imperial British Army, the units of which would take their turn in garrisoning India, or whether they should become localized forces maintained solely for service in India. There were advocates for both alternatives, but it was at last decided that the "British Army serving in India" should form part of the Imperial British Army.

The decision necessitated the transfer of the late Company's European troops to the service of the Crown. The distinction between "Royal Troops" and the "Company's European Troops", which had existed for more than 100 years disappeared. The Company's European infantry became British regiments of the line, and the Bengal, Madras and Bombay European artillery were amalgamated with the Royal Artillery. This reorganization of the British forces was not completed till 1860. It was decided that their establishment in India should not exceed 80,000 men.

Reorganization of the British forces.

In 1861 the reorganization of the Indian troops was taken in hand. Some cavalry and infantry units were disbanded, others were amalgamated, and all the Indian artillery, with some notable exceptions, was abolished. All the cavalry was now

1861.—Reorganizations of Indian Forces.

organized on the silladar system, except the three regiments of the Madras army; and the establishment of British officers of regular cavalry and infantry regiments was reduced to 6 per unit.

This reorganization of the Indian troops took some years to effect, and on its completion the establishment of the Indian forces in India was as follows:—

The Indian Forces, circa 1865.

	Cavalry regiments.	Artillery Batteries.	Sappers and Miners Corps.	Infantry regiments of single battalions.
Bengal Army . . .	19	...	1	49
Madras Army . . .	4	...	1	40
Bombay Army . . .	7	...	1	30
Punjab Frontier Force .	6	5	...	12
Hyderabad Contingent .	4	4	...	6
* Other local corps .	2	...	..	5
Total .	42	9	3	142

* Namely, 2 regiments of Central India Horse and the infantry of the Deoli and Erinpura Irregular Forces, Malwa and Meywar Bhil Corps and the Bhopal Levy. At this time the Merwara Battalion had been temporarily converted into Military Police.

The year 1861 also witnessed the introduction of three Presidency "Staff Corps." In the old Indian armies British officers belonged to regimental cadres, and in practice it had been found that the establishment of these cadres, large though they had formerly been, were insufficient to bear the strain caused by the absence of officers serving in civil employ or on the staffs of the armies. Moreover, British officers had a right to promotion in regimental succession, of which nothing could deprive them but sentence by court-martial; but officers of one regiment had no claim to equality of promotion with officers of another. Thus promotion in one regiment might be faster than in another, and the officers of the first would, through no merit of their own, obtain seniority over those of the second. There was thus a marked disparity in the rate of promotion within the various armies.

The institution of the 3 Staff Corps was intended to remove both defects. In the first place it established a corps of officers in each Presidency of sufficient strength to ensure that regimental establishments would be maintained, in spite of the drain made on them by the departure of officers on extra regimental duty. Secondly, from this time, promotion to higher army rank was governed by length of service. The officers of the several Staff Corps were placed on separate seniority lists. By this means equality in promotion was assured.* By a fiction, which tradition may have handed on since the time Clive organized regimental staffs for his newly formed Indian battalions, officers held "staff" appointments in the combatant units with which they were serving. The three Staff Corps consequently consisted of a body of military officers serving on the staff of the army or of units, and in military departments or in civil employ.

In assuming direct control of the Government of India, the British Crown had also accepted direct responsibility for the security of India. A large portion of the British army was already serving outside the United Kingdom in the Colonies and Dependencies, and the added liability of having to provide an army of any number up to 80,000 men, as the garrison of India, brought to a head the problem of maintaining such large forces overseas. Indeed, the maintenance of overseas garrisons in India and the Colonies became the chief duty of the Imperial British Army in peace.

This problem was solved by Mr. Cardwell's scheme of 1872. The two portions of the British army serving at home and abroad were approximately equal. Mr. Cardwell's first step was, by a little adjustment, to equalize the two portions. This cleared the way for the next step, by which infantry regiments of the line were linked together in pairs in "brigade districts." Some of these regiments had consisted of 2 battalions each since 1859, but the others like the Indian infantry regiments of those days, had existed as single battalions. The intention was that, out of each pair of battalions thus linked together, one battalion should serve at home and be responsible for supplying with men the other battalion serving abroad, in India or elsewhere. As was natural, this revolutionary

* But it did not remove the inequality in the rank of officers holding appointments in different corps. Thus a major in one regiment might be a company officer, whereas, in another, a captain might be a company commander. The equalizing of rank and appointments remained an insuperable difficulty until the introduction of the regimental system into the Indian infantry in 1922. An effort has now been made (1923) to remove the most glaring disparities.

change, which linked together, and made mutually supporting, battalions which had not hitherto had any connection with each other, was highly unpopular in the British Army and led to much friction and heart burning, from the feeling that the old regimental individuality and esprit de corps would suffer in the process with results disastrous to military efficiency.

Under the Cardwell scheme, the "brigade districts" each contained 2 line regiments (linked single battalions, one at home and one abroad), 2 militia battalions and the volunteer battalions of the area. This organization was maintained until 1881, when the regimental organization was introduced into the British infantry. All the constituents of the late brigade districts were welded into regiments, and these regiments were given territorial designations which disguised, beyond recognition, the numbers and titles which formerly indicated the units which they now comprised. Thus in 1872 the Cardwell system laid the foundation stone of the unification of the British Army—an example which the Indian armies were slow to follow.

In the conduct of the Afghan War of 1878—80 many defects in the military system of India became manifest. In 1879 an Army Organization Commission was assembled by Lord Lytton to explore the avenues by which military expenditure might be decreased, and to recommend measures to improve the efficiency of the Army in India for war. At this time the strength of the 3 Presidency armies was approximately—

British Troops		65,000	} 200,000.
Indian Troops		135,000	

The immediate result of the commission's recommendation was the addition of 1 British officer to Indian cavalry and infantry regiments, and the reduction of the strength of the Indian armies by 4 cavalry regiments and 18 infantry regiments. At the same time the strength of each cavalry regiment was increased from 499 to 550 of all ranks, and of each infantry (single battalion) regiment from 712 to 832.

But the most important recommendation of the commission was virtually to abolish the Presidency Armies—the seed, which 16 years later bore fruit in the commencement of the union of the armies. Before this was effected many other suggestions were made, and it may be of historical interest to compare them in the

table given in Appendix II as an indication of the influence exercised by the Presidency system over the minds of those in authority who were engaged in securing its abolition. It will be noticed that the idea of separating Burma and Sind from their parent Presidencies was not mooted till quite a late date.

Certain important changes had, however, previously taken place which cleared the way for the eventual union of the armies. In 1864 the military accounts departments of the 3 Presidencies had been consolidated under the Military Department of the Government of India, and the remount departments were amalgamated in 1876. And while the abolition of the Presidency armies was under consideration still more important changes were carried out. In 1884 the 3 ordnance departments were united under the Government of India, a partial reorganization of the transport services was effected and commissariat regulations, applicable to the whole of India were compiled. In 1886 the Punjab Frontier Force was transferred from the control of the Government of the Punjab to that of the Commander-in-Chief in India.

Again in 1886 a change in organization took place which reflected one of the main principles of the Cardwell scheme. Indian infantry regiments (battalions) were linked together in groups of 3 or sometimes 2 battalions, and were given permanent regimental centres at which it was intended that one battalion of the group should always be located. Recruits were now enrolled for a group, and, although a recruit might be trained and serve with one particular battalion, he was liable to be called upon to transfer to any other battalion of the group. The liability, however, was not a serious one, as it was only intended to enforce it in time of war. By this means a supply of men from one battalion was made available to maintain at strength another battalion of the group in case of emergency. This organization had the defect that one battalion could only be reinforced at the expense of another, but it was a great advance on any previous system. The groups of linked battalions were in no sense regiments, but the common regimental centre, and the dependence on each other for assistance, formed a certain bond of mutual interest between units which would otherwise have remained isolated.

In 1886—87, for the first time, a reserve for the Indian armies was formed. Previously, military pensioners seem to have been regarded as a potential reserve in case of need, but great reliance can scarcely have

1886-87.—First Indian Army Reserve.

been placed on them, since the first pension was then only earned after 40 years' service. In 1874 the Commander-in-Chief, Lord Napier of Magdala, advocated a graduated scale of service for pension ranging from 20 to 40 years, and recommended that men pensioned on that scale should join the reserve and be called up for one month's training annually, during which time they would be entitled to the full pay of their respective ranks.

The terms of the reserve service now introduced were briefly that there were 2 classes—an active and a garrison reserve. Service in the reserve was to be voluntary, men of not less than 5 years and not more than 12 years' colour service being eligible for the active reserve, the garrison reserve being made up of men who were pensioned at 21 years' colour service, or who had completed a combined colour and reserve service amounting to that period. The active reserve was to be called up for 1 month's training every year, and the garrison reserve for 1 month's training every alternate year. This reserve system was at first applicable to infantry only, but was afterwards extended to cavalry, artillery, and Sappers and Miners. Except for modifications in the actual terms of service, and in the establishment of the reserve, dictated by the policy of the time and the exigencies of the financial situation, this system has remained unaltered to the present day for all Indian units except the infantry, whose new reserve organization was introduced in 1923.

In 1891 the 3 Presidency Staff Corps were united in one Indian
The union of the Staff Corps.
 Corps.

The strength of the Army in India immediately before the abolition of the Presidency Armies is approximately that of the
 year 1887, of which details are given in
Establishments 1887. Appendix III.

Fourth period, 1895—1920

The Presidency Armies were abolished with effect from the 1st April 1895 by a General Order of the Government of India in the
1896.—Abolition of Army Department, No. 981, dated 26th the Presidency Armies. October 1894.

This order divided the "Army of India" into the 4 following Commands:—

Punjab (including the North-West Frontier and the Punjab Frontier Force).*

Bengal.

Madras (including Burma).

Bombay (including Sind, Quetta and Aden).

These were placed under the command of Lieutenant-Generals "Commanding the Forces Punjab, Bengal, Madras and Bombay," who were to be all under the direct command of the Commander-in-Chief in India. Each Lieutenant-General was invested with certain powers and granted an Army and Departmental Staff, and it was expressly stipulated that the business formerly transacted by the Military Departments of the Government of Madras and Bombay was now to be transacted by the Military Department of the Government of India, whenever it could not be disposed of by the Lieutenant-General Commanding or by the Commander-in-Chief in India.

Each Command was divided into 2 or 3 1st Class Districts (of which the Punjab Frontier Force constituted one) and a number of 2nd Class Districts, varying between 2 in the Punjab Command to 6 in the Bengal and Madras Commands. The British troops allotted to the several Commands were those already stationed within those Commands, while the composition of the Indian troops was as shown in Appendix IV, which also shows the approximate strength of the Army in India at that time (1895).

The figures in Appendix IV are exclusive of the following local corps which were under the control of the Government of India and did not belong to any Command:—

The Hyderabad Contingent.

2 Regiments of Central India Horse.

The Malwa Bhil Corps.

The Bhopal Battalion.

The Deoli Irregular Force.

The Erinpura Irregular Force.

* "The Punjab Frontier Force and Frontier District" in 1902, under the command of Major-General Sir C. C. Egerton, C.B., D.S.O., comprised—

The Kohat Kurram Force.

Derajat District.

Peshawar District.

Malakand Force.

The Meywar Bhil Corps.

The Merwara Battalion.

At first sight it may appear that the abolition of the Presidency armies as affected by the G. G. O. of 1894 was a revolutionary measure, but in reality it was not so. It will be observed from Appendix II that the organization now adopted bore a closer resemblance to the proposals of 1879, 1881 and 1888 than to those of 1890 and 1892. In the former the names of the Presidency armies were carefully safe-guarded. In the latter either these names were entirely discarded or additional forces were introduced, the designations of which were entirely foreign to the ancient nomenclature of the Presidency armies. One of the reasons for discarding the proposal of 1892 was the fact that, if adopted, an undue disparity in strength would exist between the Army of the North and the strengths, respectively, of the Armies of the West and South. The principle was insisted upon that the forces in the new Commands should conform to each other as nearly as possible in numerical strength. Stress was laid on the intention to maintain to the fullest extent the separation of the Madras and Bombay armies from each other and from the Bengal armies. And it was pointed out that the Bengal army would undergo no nominal change, except that the troops serving in Bengal proper would ordinarily be kept apart from those serving in the Punjab. The forces in the various Commands were in fact to be localized for service in those Commands, and the Indian units included in them, did, in fact, retain the numbers and designations which they held in the old Presidency armies.

It is true that the new organization brought all the forces under the direct control of the Commander-in-Chief in India, but this was only a further development of the changes which had already occurred between 1864 and 1892. The Commands were still as separate from each other as the old Presidency armies had been, and they included within their areas districts which had little or no connection with each other, either territorial, sentimental, racial or strategical. More drastic measures were required to complete effectively the unification of the Army in India.

Lord Kitchener took up his appointment as Commander-in-Chief in India on the 28th November 1902, and at once commenced to consider and frame a scheme for the re-organization and redistribution of the Army in India.

1903-1914.—Lord Kitchener's Reforms.

In the meanwhile he carried out the following important changes:—

- (1) On the 1st January 1903* the designation, "Indian Staff Corps," was abolished, and officers belonging to that corps were designated "Officers of the Indian Army." It was realized that the former title was a misnomer, because the bulk of the appointments held by the officers of that Corps were regimental, not staff, appointments. From that time forward the British officers, as well as the rank and file of Indian units, belonged to one corps, "the Indian Army."
- (2) On the 9th January 1903 the Burma 1st Class District was separated from the Madras Command and constituted a separate independent Command, designated the Burma Command.
- (3) With effect from the 1st April 1903 the Hyderabad Contingent was broken up and delocalized. One cavalry regiment, the 3rd Lancers, Hyderabad Contingent, was absorbed into the other three, which were transferred to the Bombay Command, while the 6 infantry regiments of the Contingent were transferred to the Madras Command. (G. G. O. No. 211 of 13-3-23).
- (4) On the same date, 1st April 1903, the Punjab Frontier Force and Frontier District and its territorial area were distributed between the Peshawar, Kohat and Derajat Districts (G. G. O. No. 237 of 1903).
- (5) In an Indian Army Order No. 181, dated the 2nd October 1903, the new designations and numbers of all units of the Indian Army were published and ordered to have effect from the date of the order. It is unnecessary to discuss all the details of the scheme, but the result is shown in Appendix V, where the designations given in 1903 are compared with those which existed previously, and with those which afterwards replaced them in the renumbering of 1922. It will suffice to add that, in the renumbering of 1903, all units of the Indian Army were numbered in one sequence according to their arms

3rd and 4th Renumbering of Indian Units.

* G. G. O. No. 1 of 1903. Nevertheless officers of the Indian Army still draw "staff" pay of their regimental appointments.

(excluding Gurkha battalions which were numbered separately) and all mention of the designations of the old Presidency armies was omitted.*

These important measures, carried out within less than a year after Lord Kitchener arrived in India, were almost sufficient of themselves to complete the union of the Indian Army. But more was to follow.

On the 5th November 1903 Lord Kitchener's proposals for the reorganization and redistribution of the Army in India were communicated to the Government of India. Four great principles were enunciated in the proposals:—

- (i) That the main function of the army was to defend the North-West Frontier against an aggressive enemy;
- (ii) That the army in peace should be organized, distributed and trained in units of command similar to those in which it would take the field in war;
- (iii) That the maintenance of internal security was a means to an end, namely, to set free the field army to carry out its functions;
- (iv) That all fighting units, in their several spheres, should be equally capable of carrying out all the rôles of an army in the field, and that they should be given equal chances, in experience and training, of bearing these rôles.

On his arrival in India Lord Kitchener had found that the Command areas and district areas in which the Army in India was distributed were mere geographical divisions of varied extent, with a different number of troops in each. They had been fixed without any reference to a matured plan of adapting peace formations to the requirements of war. The troops, scattered through a number of

* The Committee on whose recommendations the renumbering was based, was composed of the following officers:—

President.

Major-General D. J. S. MACLEOD, C.B., D.S.O., M.G.C., Commanding the Forces Bengal.

Members.

Brigadier-General B. DUFF, C.B., C.I.E., Deputy Adjutant General in India.

Colonel C. F. FRANCIS, A.A.G.

Colonel H. N. McRAE, C.B., A.D.C.

Secretary.

Lieutenant-Colonel W. R. BIRDWOOD, 11th Bengal Lancers, Assistant Military Secretary and Interpreter to His Excellency the Commander-in-Chief in India.

small military stations, could not be collected for training in the tactical formations in which they would be employed in war. The troops were localized in the new commands precisely as they had been in the old Presidency areas, in all of which, except the Punjab Command, no experience of North-West Frontier conditions could be gained.

The preliminary steps that were taken to level up the army have already been described. The central feature of Lord Kitchener's original scheme was to divide the Army in India into 3 Army Corps, exclusive of Aden, the Burma District, Chitral, Kohat and the Derajat. Each Army Corps was to comprise 3 Divisions, each of which was to be complete in field army troops and in troops for internal defence. The Army Corps distribution was to be as follows:—

Northern Army Corps—

- 1st (Peshawar) Division.
- 2nd (Rawalpindi) Division.
- 3rd (Lahore) Division.

Western Army Corps—

- 4th (Quetta) Division.
- 5th (Mhow) Division.
- 6th (Poona) Division.

Eastern Army Corps—

- 7th (Meerut) Division.
- 8th (Lucknow) Division.
- 9th (Secunderabad) Division.

It will be observed that, under this distribution, all trace of the names of the Presidency armies is obliterated and that Aden, Burma, Sind and Baluchistan have been finally separated from the Presidency areas to which, for so long, they had belonged.

The establishment of troops in India in 1903 was almost exactly sufficient to fill the new formations, but the concentration of troops towards the North-West Frontier to meet aggression, and elsewhere in India to secure training in tactical formations, necessitated the abandonment of some 34 stations, the move of a large number of troops, and the building of new quarters for them elsewhere. For financial reasons this was a serious objection to the scheme, which could thus only be carried out gradually.

However, on the 1st September 1904 the Secretary of State for India sanctioned the carrying out of any part of the scheme which did not involve extra expense. The 9 Divisional Commands were thus established, and the Madras Command, then commanded by Lieutenant-General Sir C. Egerton, which was superfluous to the scheme, was abolished by an order of the Secretary of State, dated 28th September 1904.

This organization was not, however, completely adopted, and by the beginning of 1905 the following was the distribution of the Army in India:—

Northern Command—

- 1st (Peshawar) Division.
- 2nd (Rawalpindi) Division.
- 3rd (Lahore) Division.
- Kohat, Bannu and Derajat Brigades.

Western Command—

- 4th (Quetta) Division.
- 5th (Mhow) Division.
- 6th (Poona) Division.
- Aden Brigade.

Eastern Command—

- 7th (Meerut) Division.
- 8th (Lucknow) Division.

9th (Secunderabad) Division } not included in a Command.
Burma Division. }

The preceding organization was again replaced by a new one, and by 1908 we find the Army in India divided up as follows into two armies only:—

Northern Army—

- 1st (Peshawar) Division.
- 2nd (Rawalpindi) Division.
- 3rd (Lahore) Division.
- 7th (Meerut) Division.
- 8th (Lucknow) Division.
- Kohat, Bannu and Derajat Brigades.

Southern Army—

- 4th (Quetta) Division.
- 5th (Mhow) Division.
- 6th (Poona) Division.
- 9th (Secunderabad) Division.
- Burma Division.
- Aden Brigade.

At the head of each of the two Armies was a General officer, who was responsible for command, inspection and training, but had no administrative functions or responsibility, and consequently, no administrative staff. The ten divisions constituting the two Armies were directly subordinate to Army Headquarters for administrative purposes, and there was little, if any, decentralization of administrative duties.

The detailed organization of the Army as thus re-constituted is shown in Appendix IX. Briefly, its allotment was as follows:—

Allotment.	Formation.	Strength.
Field Army . . .	Army Troops	} 152,000 men.
	9 divisions	
	8 cavalry brigades	
Internal Security . . .	3 independent frontier brigades .	} 82,000 men.
	Troops allotted to internal security areas.	
		} 102 guns.

The strength of the Army in India when Lord Kitchener's scheme was under consideration is shown in Appendix VI.

Strength of Army in India in 1903.

The redistribution scheme, as recommended by Lord Kitchener, had not been completely carried out when the Great War of 1914-18 broke out, but it is to the observance of the principles which he laid down, and by which the union of the Army in India was finally completed, that we must largely attribute the fact that the Army in India took up its responsibilities in the great struggle as promptly as it did.

This is not the place to dilate on the share taken in the Great War by the troops contributed in India, but that it was no small share will be proved by a comparison of the two tables given in

Appendix VII. On the 1st August 1914, the total strength of the fighting services of the Indian Army in all ranks was 155,423. By the time of the armistice this had risen to approximately 573,484. The latter number included large Indian armies serving in Palestine, Egypt, Iraq, Salonika and elsewhere in the world outside India. India, of course, only paid for her normal army. The remaining troops were regarded as fighting the Empire's battles and were paid for by His Majesty's Government.

Fifth period, 1921 to present day

As a result of certain defects still remaining in the military system, which became manifest in the conduct of the Great War of 1914-18 a reorganization of the Army in India was commenced in 1921 and, though still in progress (1923), is rapidly nearing completion. To chronicle in detail the causes which led to this reorganization, the principles on which it was based, and to describe the constitution of the Army in India of the present day, is the purpose of the succeeding chapters of this book. In concluding the present chapter, however, it is desirable to explain why the latest stage in the evolution of the Army in India can be described as the "period of consolidation."

The Army in India, in fact though not in name, has existed for nearly 300 years. We have seen how at first it consisted of European troops only; how it increased until it was divided into three separate and individual bodies called Presidency Armies (besides localised troops) each Army being still further sub-divided into Royal troops, Company's European troops and Company's native troops; how in 1860 one of these sub-divisions was obliterated by the absorption of the King's and the Company's European troops into the "British Army in India", the Indian troops becoming at the same time part of Her Majesty's Forces; and how, from that date measures were taken to undermine the sovereignty of the Presidency Armies until, by their abolition in name and in fact, a united army was formed.

Since the Great War the process of evolution has advanced a further stage. The regimental system has been introduced into the Indian infantry (excluding Gurkha Regiments which already consisted of two battalions) and the battalions of these newly formed regiments, unlike those of 1796, have a mutual bond of interest in the training battalion, to which each active battalion of the regiment

contributes a proportion of personnel and on whom each battalion is ultimately dependent for its efficiency. Indian cavalry regiments are linked together in groups. Even the Gurkha regiments are linked in pairs and may rely on each other to a certain extent for support in time of emergency. Artillery training centres have been formed for the supply of recruits and reinforcements for artillery units and the two Divisional Signal Companies, formerly independent, are now combined in the Indian Signal Corps.

The table given in Appendix VIII discloses a further significant phenomenon, the intermingling of British and Indian ranks in the same unit. From early times there has always been a certain proportion of British ranks in Indian units. More recently the process has been reversed and Indian combatants have been introduced into British units. This dilution has now been carried to such an extent that, excluding British officers, the only types of combatant units in the Army in India which do not include both races in their ranks are British and Indian Cavalry, Indian Infantry and the Tank Corps. Lastly, the places of British officers are being filled by Indian officers who hold the King's Commission and are in every respect on an equality with their British comrades. If the previous stage of the evolution of the Army in India is appropriately described as the period of union, it is not unjustifiable to designate the period ending with the present day as the period of consolidation. The next phase, it may be anticipated, will be one of increasing Indianization, which is already claimed as the natural outcome of the stimulus lent to Indian political aspirations by the grant of the constitutional reforms of 1919: and as we have seen, the process of Indianizing the Army in India has already commenced.

Chapter II

The Great War and period of reconstruction

IN 1914, when the Great War began, the organization of the Army in India and the distribution and allotment of troops were those introduced by Lord Kitchener, which have been described in the preceding chapter.

1914.—The outbreak of the Great War.

It must not, however, be assumed that in the interval there had been no development or diversification of Army policy. Changes, both in the external and internal situation, had led to the appointment in 1912 of an Army in India Committee, under the presidency of Field Marshal Lord Nicholson, whose primary task was to consider and report on the numbers and constitution of the armed forces which should be maintained in order to meet India's military obligations, as then envisaged. This committee completed their enquiries early in 1913; but, before any action could be taken upon their recommendations, the Great War of 1914-18 broke out, and, by its unprecedented character and extent, rendered nugatory the results of the committee's labours.

The Nicholson Committee of 1912.

The system of command devised by Lord Kitchener was based on the premise that the troops allotted to divisions would be concentrated within their respective divisional areas. This concentration, however, had been dependent on the readjustment of accommodation proposed by Lord Kitchener in 1904; whereas on financial grounds immediate readjustment had been found impracticable. Consequently, troops allotted both to war divisions and to internal security areas were to a large extent stationed outside their respective areas of training and duty. Under the imperfect execution of Lord Kitchener's proposals, therefore, adequate and continuous training for war was impracticable, owing to the dispersal of troops. Defects of the system itself were that Army Headquarters, dealing direct with divisions, was burdened with the consideration of minor administrative detail; divisional commanders were similarly burdened with administrative work to the

The defects of Lord Kitchener's system.

detriment of training for war; no provision had been made for the command or administration of internal security area troops after the departure of the field army on field service; and on mobilization, therefore, no machinery existed to ensure continuity of normal military administration in India itself.

The exceptional character of the Great War of 1914-18, and the strain which it imposed upon the resources of every country engaged in it, revealed, however, even greater defects in the organization of the Army in India than those which have so far been mentioned, and grave defects also in its equipment. The first and most serious defect was that the ancillary services of the Army were either non-existent or undeveloped. On this account only 7 of the nominal complement of 9 field army divisions were actually capable of immediate mobilization. Peace establishments were generally so inadequate that to effect mobilization of the war divisions internal security units had to be largely depleted. Technical and administrative personnel required on mobilization had to be found from the establishments of combatant units. On the other hand, the standard of equipment in the Indian Army before the war was so low that India's military forces were at a grave disadvantage when they found themselves fighting in conjunction with troops equipped on a modern basis. Neither the Air Force nor the Mechanical Transport service existed, while technical equipments were largely out of date. In respect of mechanical equipment generally, machine guns, artillery, hospital equipment and medical establishments, the Army in India was in a markedly inferior condition to the European armies. The divisional artillery was inadequate to modern requirements, and the so-called heavy artillery was obsolete. Sufficient machinery for reinforcements was also lacking. The basis of the reserve was soon discovered to be thoroughly unsound. There was no organization in existence to cope with the recruitment of fresh personnel, or with their training, on the scale required to meet heavy war wastage and to permit of large expansion. Finally, one great and far-reaching cause of weakness was that India's indigenous resources had not been sufficiently developed and she was, therefore, largely dependent on outside sources of supply for munitions of war.

It is not within the scope of this book to relate the manner in which these defects manifested themselves during the Great War, or to describe the unfortunate consequences which at one time or another resulted from them. As everyone knows, the allied armies

The start of the reorganization.

were ultimately successful; and it is sufficient to say that the lack of initial preparation in the Army in India was actually overcome by measures improvised to the best of our military advisers' capacity as the war went on. But the need for improvisation clearly delayed achievement, and involved in the long run heavier expenditure than might otherwise have been necessary. The lessons of the war were too clear to be neglected, and, when the war came to an end, the military advisers of Government were ready to embark upon a definite policy of reorganization and reform. The task could not be commenced immediately, since after the armistice large bodies of Indian troops continued to be employed on His Majesty's service in the mandated territories and other overseas theatres, while the Government of India were further preoccupied by the outbreak of the third Afghan War and the operations in Waziristan.

In 1919 however, a strong Army in India Committee was appointed, Lord Esher being president, with
The Esher Committee. the following terms of reference:—

1. To enquire into and report, with special reference to *post-bellum* conditions, upon the administration and, where necessary, the organization of the Army in India, including its relations with the War Office and the India Office, and the relations of the two offices to one another.
2. To consider the position of the Commander-in-Chief in his dual capacity as head of the Army and Member of the Executive Council, and to make recommendations.
3. To consider and to report upon any other matters which they may decide are relevant to the enquiry.

The Committee presented their report towards the close of 1920. About the same time, General Lord Rawlinson became Commander-in-Chief in India: it had also become possible to assemble at Army Headquarters a staff composed largely of officers who had gained distinction and invaluable experience during the Great War: and under these auspices, the process of reorganization began to take a practical shape. The general scheme which was evolved had a wider scope than the recommendations of the Esher Committee, since the terms of reference to that Committee had been limited, and, apart from this, there were many questions both of principle

**Lord Rawlinson's
 appointment as Com-
 mander-in-Chief in
 India.**

and detail which it was impracticable for the committee in the time at their disposal to take fully into consideration. But it is important to remember that the Esher Committee were largely responsible for improving the terms of service of the Indian ranks of the Army in India, and for placing the improvement on a firm basis. The Indian soldier and the Indian officer with the Viceroy's commission are now fed, clothed, housed, and, in the mounted branches, horsed by the State, on an adequate standard: and their pay and pensions are now assessed on a scale which subsequent experience has shown to be sufficient to obtain recruits in the number required and to secure contentment and efficiency among those recruited. It would be hard to exaggerate the importance of this step. It was fundamental to the success of the Army reforms and greatly facilitated the task of the reformers.

The process of reorganization was, in its more technical and specific aspect, complicated and laborious. It continued throughout 1921 and 1922: and at the close of 1922 the results so far achieved were subjected to the scrutiny of Lord Inchcape's Retrenchment Committee. The further ordeal was necessary. In the economic conditions prevailing in the years immediately after the war, the cost of an army, organized and equipped on standards deduced from the experience of the war, was greater than India could reasonably afford. From the purely military point of view, of course, retrenchment was unwelcome. But it was satisfactory that the pruning-knife of the Retrenchment Committee was applied to an organization which by that time was, in conception at any rate, complete in its several parts. The Royal Air Force had been added to the defence services of the Indian Empire: Mechanical Transport and Signal services had also been added: the Artillery arm had been reorganized: and last but not least the staff and commands of the Army had been reconstituted in accordance with modern military ideas. Further, while the Retrenchment Committee recommended large reductions in military expenditure as a whole, they were careful to suggest that in carrying out their proposals the military advisers of the Government of India should be given a certain discretion, the object of the Committee being to ensure that in the result no vital service of the Army should be unduly weakened, and that, if the Army in India were reduced in total strength, it should nevertheless retain the essential features of the organization of a modern army and the capacity for expansion in war.

Before concluding this brief retrospect, it is essential to refer to the general political conditions under which the post-war re-organization of the Army in India was

The Montagu Chelmsford Reforms.

carried out. Under the constitution established by the Montagu Chelmsford Reforms, military expenditure was excluded from the control of the Indian Legislature; but it was inevitable that the elected representatives of the people should display a strong interest in military affairs and, by such methods as were open to them, seek to exercise an indirect influence on military administration and the Army budget. An early indication of this tendency was afforded by the request that the Legislative Assembly should be given an opportunity of expressing their views on the report of the Esher Committee. The request was granted and, in March 1921, the Assembly passed a number of resolutions on the subject, of which the following bore directly upon the Army reorganization then in progress—"That the purpose of the Army in India must be held to be the defence of India against external aggression and the maintenance of internal peace and tranquillity. To the extent that it is necessary for India to maintain an Army for these purposes, its organization, equipment and administration should be thoroughly up to date and, with due regard to Indian conditions, in accordance with present day standards of efficiency in the British Army, so that when the Army in India has to co-operate with the British Army on any occasion there may be no dissimilarities of organization, etc., which would render such co-operation difficult." The resolution was significant because of the implied insistence that India's military obligations should be limited to maintaining an Army sufficient for Indian requirements only. The Esher Committee had not, however, intended to suggest that India should assume a greater military liability than the protection of her own territories against external attack and internal disturbance, and no greater responsibility than this had been required of India in the past.* In fact, it is known to be a fundamental condition of India's connection with the British Empire, that, if India is exposed to attack which her own resources cannot effectively repeal, His Majesty's Government, if it is humanly possible to do so, will come to her assistance with the armed forces of the United Kingdom. The real importance of the resolution quoted lay in the claim which it made, as on behalf of Indian political opinion, in the newly established political conditions, that the defence services of India should be as efficient as

* Cf. Section 22 of Government of India Act, 1919.

those of western countries: and also in its acceptance of India's liability to co-operate on future occasions with the British Army. The doctrine enunciated in the Resolution was sound: but there were many difficulties to be overcome in putting it into practice. As has been shown, there was a limit to India's financial capacity to bear the new expenditure entailed by a higher standard of preparation for war: and it must not be forgotten in this connection that, as a result of the Great War, the cost of all Army services had greatly increased. The pay of every class of personnel had had to be raised. In the case of Indian ranks the rise was regarded as more or less permanent: in the case of British ranks the enhanced rates were certain to endure for several years. Modern equipment was expensive. Finally the problem of India's defence taken by itself had become more complicated. The safety of India depends primarily on the protection of the North-West Frontier: and the frontier tribes after the war were more formidable than they had ever been before, owing to better armament, more plentiful supplies of ammunition and a great advance in tactical skill. On the other hand, old internal dangers had been revived in a new form by the non-co-operation movement, and the insidious attempts from alien sources to propagate in India the principles of Bolshevism.

Chapter III

The Principles of the Post-War Reorganization

THE first requirements of the re-construction as deduced from the considerations which have just been stated were—

- (1) An improved system of command and distribution of troops.
- (2) A proper balance between combatant and ancillary services.
- (3) The organization and equipment of the army in accordance with modern European standards.
- (4) The maintenance of machinery in peace to provide for reinforcement and rapid expansion in war.

In framing the structure as a whole, and assessing the relative strength and value of its several parts, financial limitations had to be carefully observed; and in the following paragraphs an account is given, in some detail, of the principles by which the military advisers of Government were guided in dealing with their four main propositions.

The post-war organization of the High Command of the Army in India is described in another place. The military structure

System of Command and distribution of Troops. subordinate to Army Headquarters, as finally evolved, was based upon the fundamental proposition that no system of organization can produce good results which does not permit of close personal relations between commanders, staffs and troops. In order to achieve this object the first and most obvious essential is that the unit area of Command shall be restricted, and it must be remembered that in India great distances, and, in certain parts, relatively inferior communications, impose a special limitation on the area which can be effectively administered by one commander. It was further premised in the same connection that, so far as possible, the troops under each commander should be concentrated in the area which he commands, in such a way as to render possible combined training for war. Other factors were also taken into account as making for convenience and elasticity of administration. Thus it is desirable that the system of administration in peace

time should be readily adaptable to war conditions to permit of transition from peace to war with the minimum of disturbance. As has been previously pointed out, it is specially important that there should be machinery in existence to provide for continuity of the normal administration when the field army is mobilized. A considerable measure of decentralization in administrative matters is desirable for this and other purposes. It is also convenient to the government of the country in general that military commands should coincide, as far as possible, with the main divisions of civil jurisdiction. Finally, in order to leave Army Headquarters free to concentrate upon large questions of policy, and generally to secure the maximum efficiency in the system as a whole, it is considered that the High Command should not be required to have direct relations with more than six subordinate commanders; and it follows that the majority of these should be officers of high status, to whom large responsibilities can safely be entrusted.

These are the considerations which in the main led to the adoption in 1921 of the system of four commands, each under a General

The Four Command System.

Officer Commanding-in-Chief. The details of the organization are given in Appendix X, and it will be seen that the Commands comprise 14 districts: that the area of the Northern Command, with its headquarters at Murree, coincides roughly with the Punjab and North-West Frontier Province: the Southern Command, with headquarters at Poona, coincides roughly with the Bombay and Madras Presidencies and part of the Central Provinces: the Eastern Command, with headquarters at Naini Tal, coincides roughly with the Bengal Presidency and the United Provinces: while the Western Command, whose headquarters have for the moment been placed provisionally at Quetta, covers Sind, Rajputana and Baluchistan.

The General Officer Commanding-in-Chief of each Command is now responsible for the command, administration, training and general efficiency of the troops stationed within his area, and also for all internal security arrangements. To enable these additional duties to be carried out, each General Officer Commanding-in-Chief has been provided with a carefully organized and proportioned staff, while the staffs of districts have been so constituted, that a certain residue is earmarked to carry on the normal routine when mobilization takes place. The introduction of the four Command system has been followed by a considerable delegation both of administrative and financial authority, and in every other respect also the organization has been framed in such a way as to give

effect, so far as is practicable, to the fundamental principles on which it is based. Apart from the four Commands, the only formations directly controlled by Army Headquarters are the Waziristan and Burma districts and the Aden brigade. Waziristan will ultimately be merged in a Command, but is separate for the time being because since 1919 it has been an area of active service operations of an unusual character, with the conduct of which questions of high policy, requiring the direction of the Government of India, were closely allied; while Burma and Aden, mainly because of their geographical situation, cannot conveniently be included in any of the four Command areas. The three areas mentioned are small and obviously necessary exceptions to a scheme which is otherwise, so far as the physical conditions of India permit, symmetrical and well proportioned.

The distribution of the troops allotted to the Commands and districts has been determined by the principle that the striking force must be ready to function in war, **Distribution of Troops.** commanded and constituted as it is in peace. With this end in view, the Army in India is now regarded as comprising three categories of troops:—

- (i) Covering Troops.
- (ii) The Field Army.
- (iii) Internal Security Troops.

The rôle of the Covering Force is to deal with minor frontier outbreaks, and, in the event of major operations, to form a screen behind which mobilization can proceed **The Covering Troops.** undisturbed. The allotment of a specific force for these duties was rendered necessary by the defection of the Border Militias in 1919. The force has taken the place of the Militias and of the 3 Frontier Brigades also, and it normally consists of $12\frac{1}{4}$ infantry brigades with a due proportion of other arms.

The field army consists of 4 Divisions and 5 Cavalry Brigades, as compared with 9 Divisions and 8 Cavalry Brigades before the war. The Field Army is India's striking force in a major war, and, to compensate for reduction in numbers, it is necessary that the force should possess the fullest measure of mobility and offensive power. The provision of modern equipment and adequate ancillary services is, in the case of the field army, an obvious and paramount necessity.

Internal security troops are a necessary feature of every military organization. That they are specially necessary in India is a matter of common knowledge, emphasised in recent times by the Moplah rebellion of 1921, and the numerous occasions on which in the years 1920-22 troops were called out in support of the civil administration. In times of external peace, the field army is available to assist in internal security duties. But in time of war, the field army must be free to carry out its legitimate rôle, undisturbed by internal calls. It should not be forgotten that there are in India some 4,000 miles of strategic railway to be guarded, the working of which must be ensured on mobilization.

It is necessary to add that, while the total of the forces maintained for different rôles taken together is regarded as, in present circumstances, an irreducible minimum, the actual allotment of troops to each category of duty must inevitably vary from time to time. It will be readily perceived, therefore, that the principle previously laid down by Lord Kitchener still holds good, namely that all the constituent elements of the army must be trained and organized on a uniform basis to permit of interchangeability.

If fighting troops are to take the field and operate efficiently, they must be supplemented by a due proportion of ancillary services

Balance.	to provide for their maintenance and mobility, and, as has already been shown, the experience of the Great War had made it clear that the administrative units required in war should be separately constituted in peace. Improvisation, to meet the calls of war, presents in India certain special difficulties, quite apart from the military and financial objections of a general character which have been previously mentioned. This is due to the fact that the ancillary services of an army are manned very largely by trained technical personnel, who are not obtainable, in the numbers required, from the trades and industries of India. Reliance is placed, to a considerable extent, on reserves of civilian personnel who are normally employed in certain Government Departments, <i>e.g.</i> , the Railways, the Post and Telegraph Department, etc. These, however, are not sufficient to remove the necessity for maintaining in peace time a certain number of organized military units, though, for reasons of economy, a proportion of these units are normally maintained on a lower or cadre establishment which can readily be expanded in war.
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The ancillary services are dealt with in detail in separate chapters: but in the present connection it is appropriate to mention

another special difficulty which has to be faced in dealing with the transportation services of an army whose most likely sphere of operations is the North-West Frontier. Wheeled transport is infinitely more efficient and economical than pack transport: but for wheeled transport, particularly mechanical transport, good roads are essential, and these cannot always be reckoned upon in the conditions of Indian warfare. The object aimed at is, however, to employ wheeled transport as much as possible, and development of road communications on the frontier is for this, as well as for other reasons, an integral part of military policy in India. A table to indicate the relative efficiency of the various forms of transport is given in Appendix XI.

The Great War taught the lesson that though moral still is, and always must be, the supreme factor in battle, yet in modern war the utmost gallantry is unavailing in the face of marked superiority of armament.

Equipment.

In warfare with a savage or semi-savage enemy there is equally strong justification for the use of modern equipment. An enemy of this character has certain advantages on his side which it is necessary to counterbalance or out-weigh by scientific weapons of war. Efficient equipment saves money and men's lives. These were the primary considerations leading to the decision that the army in India should be provided with armament similar in character to the armament of western armies: but, in carrying out the decision, it was found practicable, in Indian conditions, to adopt a lower and more economical scale of provision. The defence of the North-West Frontier being the primary rôle of the field army, the scale and nature of its equipment require to be adapted to operations in a terrain possessing certain marked characteristics, of which the most important is the relative deficiency of first class communications. As previously indicated, it is probable that, in repelling any considerable aggression, pack transport would still have to be employed, and this means long unwieldy transport columns, unless a balance is carefully struck between a high scale of equipment and a high degree of mobility. The military strength of the probable enemy, in particular the nature of his armament, and the disadvantages of terrain, to which he himself is exposed, also require to be studied. On the basis of these considerations, a scale of mechanical equipment has been adopted for the Army in India much below that accepted in the British Army. The clearest example is to be found in the scale of automatic weapons, machine guns heavy and light, which were the dominating weapons on every

front in the Great War. An infantry battalion on the war establishment of the United Kingdom now has 8 machine guns and 34 Lewis guns: on the Indian establishment the allotment is 4 machine and 16 Lewis guns. Similarly the divisional artillery in the United Kingdom consists of 3 field artillery brigades and one pack artillery brigade of 3 batteries: while in India the corresponding provision is 2 field artillery brigades and 1 pack artillery brigade of 4 batteries. To meet local conditions and also to secure economy, these variations from the scales of the British Army are unavoidable. It is obviously necessary, on the other hand, that such variations should be in scale only: diversity in type of equipment would be open to serious objection.

Reinforcements of British combatant personnel for the purpose of replacing wastage in war cannot of course be obtained in India, save to a negligible extent; and it has always been recognized that the effective **Maintenance and reinforcement in War: British troops.** maintenance of British units in India, during a period of war, depends primarily on the prompt and regular despatch of reinforcements from the United Kingdom. The occurrence of war, however, cannot at all times be foreseen; and, in order to provide for the immediate wastage resulting from the first outbreak of hostilities, it has been the practice for many years to maintain in the British infantry in India a peace establishment considerably larger than the war establishment. In principle, the peace establishment should be sufficient to find the war establishment, and also to meet all calls after mobilization until such time as a regular flow of reinforcements from the United Kingdom can be established. As a result of the recommendations of the Retrenchment Committee of 1922-23, however, the margin of peace over war establishment was greatly reduced. The following table shows the present position as compared with that obtaining in 1914—

British Infantry Battalion.

	Peace Establishment.	War Establishment.	Balance.
1914	1,003	816	187
1923	882	810	42

The war establishment for British combatant units in India has been arrived at by the only sound process, that of building up from the smallest self-contained component, that is to say, from the platoon in the infantry and from a sub-section in the artillery. These components themselves cannot be permitted to fall below a certain strength. The number of the components, that is to say, the total war establishment of a unit is determined by long practical experience in the field. There are certain well-defined limits to the number of men who can effectively be commanded, administered and manœuvred by a single unit commander.

The effect of the reduction of peace establishments has been mitigated by a departure of considerable interest—which had previously been taken—consisting in the replacement of British ranks by Indian other ranks in the British Infantry and the Royal Artillery for the purpose of carrying out certain duties. The extent to which this process of dilution has been carried out is discussed in Chapters VI and VII, which deal in detail with the organization of the British Infantry and Royal Artillery respectively. To ensure the success of the new arrangement, the Royal Artillery training centre has been created, as a peace formation, to carry out the recruitment and training of Indian ranks for the Royal Artillery, and to provide for war expansion. A training company to fulfil the same functions in respect of the Indian personnel of machine gun platoons of British Infantry battalions has also been formed.

The pre-war arrangements for reinforcing Indian troops broke down completely in the Great War. The reserve which was in existence failed, and no adequate machinery existed to carry out recruitment and training on an extended scale after mobilization.

Maintenance and reinforcement in war: Indian troops.

The terms of service of the pre-war Indian reservist—terms which tended to produce a reserve largely composed of individuals past the age of military efficiency—and the modifications which have now been introduced in the case of the infantry arm are discussed in detail in Chapter X. The new terms of enlistment in the Indian infantry, which include a compulsory period in the reserve, resemble the terms of enlistment in the British Service, and the Indian infantry reserve, as now constituted, should be an efficient and reliable source whence to meet wastage in war.

There are certain difficulties peculiar to India which stand in the way of applying the same reserve system to other arms. In the United Kingdom, requirements in animals are, on mobiliza-

tion, completed to war establishments from civilian sources; but in India this is impossible. For the cavalry and artillery arms in India it is necessary to maintain in peace an establishment of animals greater than the war establishments. The Indian infantry reserve was provided by reducing the personnel of peace establishments, but the necessity for maintaining and caring for the requisite establishment of animals makes it impossible to adopt a similar expedient in the case of the mounted arms.

During the Great War individual units in the field were maintained from dépôts constituted from the unit itself and left behind in India. For reasons which it would be tedious to explain, the system was a complete and acknowledged failure: and one of the most important features of the post-war reorganization of the army is the machinery which has been devised to relieve combatant units of the training of recruits both in peace and war, to ensure efficient war maintenance, and to provide for continuity of unit administration. The machinery consists of—

Machinery for training and expansion—The unit system.

- (a) For the Indian personnel of the Artillery—The Royal and Pack Artillery Training Centres.
- (b) For Sappers and Miners—Headquarters, Corps of Sappers and Miners.
- (c) For the Indian Signal Corps—The Signal Training Centre and Dépôt.
- (d) For Indian Cavalry—The Group Dépôt.
- (e) For Indian infantry and pioneers—The Training Battalion.

With the exception of the Cavalry group dépôt, all the above units now exist in peace. The details of the machinery will be found in the chapters relating to individual services and arms.

Details of the authorized establishment, composition and organization of the reconstructed army in India will be found in the appendices.

Conclusion.

There is one particularly significant aspect of the new dispositions. The necessary improvements in organization, the balance between combatant and ancillary services, and the higher standard of equipment could only be secured, within the financial limitations imposed, by a reduction of combatant troops. The extent of the reduction is shown in the following table.

Combatants.

	British Ranks.	Indian Ranks.	TOTAL.
1914	75,366	158,908	234,274
1923	57,080	140,052	197,132
Reduction	18,286	18,856	37,142

The sacrifice was deliberately made on the view that a relatively small army, which is efficient, well-equipped, mobile and capable of large expansion in war, is of greater value than an army large in numbers but deficient in essential ancillary services and up-to-date equipment. At the same time, it is important to note the observations which were made by General Lord Rawlinson in announcing to the Legislative Assembly, in July 1923, the reductions of fighting troops which it had been decided to make on the recommendation of the Retrenchment Committee. These observations were as follows:—

“ In giving my support to the proposals of the Retrenchment Committee for the reduction of combatant troops, I made it clear that my acquiescence must not be construed as meaning that I reject once and for all, as unnecessarily high, the standard of defence which had previously been adopted in the post-war organization of the Army in India. I held, and I still maintain, that the reductions have been determined primarily by financial considerations, and I accepted them in order to balance the budget.

“ I have from the first advised that, if and when the resources at the disposal of the Government of India increase, the Government of India, as they will aim at making more liberal provision for schemes of social and material betterment, should also be prepared to allot funds for increasing the strength of the fighting troops. His

THE EVOLUTION OF THE ARMY IN INDIA

Majesty's Government have signified that they attach special importance to those views, and they have sanctioned the reductions on the understanding that the Government of India will do their utmost to give effect to my advice when the financial situation improves."

Chapter IV

The Administration of the Army in India and the High Command

THE constitutional arrangements for the control of Army administration and for the supreme command of the Army have not been altered in any essential respect since the Great War. The preservation of the *status quo ante bellum* was not, however, decided upon without a thorough re-examination of the merits of the existing system or, it must be stated, without a certain amount of controversy. One of the three terms of reference to the Army in India Committee of 1919-20 was—

“To consider the position of the Commander-in-Chief in his dual capacity as head of the Army and Member of the Executive Council, and to make recommendations.”

The subject was one of extreme difficulty, and it will be necessary in due course to indicate the nature of the issues which the Committee discussed—and discussed exhaustively: but the Committee themselves were in the end unable to agree unanimously upon any new constructive proposal, and subsequent discussion has so far endorsed the maintenance of existing arrangements. The institutions, which have thus survived the Great War and the process of post-war reconstruction, are founded upon section 33 of the Government of India Act, 1919, which reads:—

“Subject to the provisions of this Act and the rules made thereunder, the superintendence, direction and control of the civil and military Government of India is vested in the Governor General in Council who is required to pay due obedience to all such orders as he may receive from the Secretary of State.”

It has already been explained that, under section 22 of the Government of India Act, the purposes for which the Army in India is maintained are specifically limited, and that in a grave emergency it would be a recognised liability of His Majesty's Government to come to India's assistance with the armed forces of the United Kingdom; and it is obvious, therefore, that the defence of India must be regarded as one of the permanent problems of

Imperial strategy. On an ultimate analysis, these are the considerations which determine that His Majesty's Government and the Secretary of State, as one of His Majesty's ministers, should have a special responsibility and authority in regard to the military administration in India.

The Secretary of State's principal adviser on Indian military affairs is the Secretary in the Military Department of the India Office. The post is filled by an officer of the

The India Office. Indian Army of high rank—he is usually a Lieutenant-General—with recent Indian experience. The Military Secretary is assisted by one first grade staff officer, selected from the Indian Army. In order that he may keep in touch with the current of Indian affairs the Military Secretary is expected to visit India during the tenure of his office. In addition, by a practice which has obtained for many years, a retired Indian Army officer of high rank has a seat upon the Secretary of State's Council.

The Viceroy's Executive Council exercise in respect of Army administration the same authority and functions as they exercise

The Governor General in Council and the Legislature.

in respect of other departments of the Government: and it has been previously explained that, in the first phase of the representative institutions conferred upon India by the Montagu-Chelmsford Reforms Scheme, Army expenditure and the direction of military policy have been excluded from the control of the Legislature. The next authority in the chain of administrative arrangements is His Excellency the Commander-in-Chief, who by custom is also the

The Commander-in-Chief and Army Member.

Army Member of the Viceroy's Executive Council. His present position, and the process by which in recent times his present functions have been determined, can conveniently be explained by quoting *verbatim* from the report of the Esher Committee of 1919-20 the following passage:—

“ Prior to 1906 there were two members of the Executive Council, the Commander-in-Chief, who was responsible for command and executive work, and who had under him 3 principal staff officers—the Adjutant General, the Quartermaster General and the Principal Medical Officer—and the Military Member, also a soldier, who was responsible for the administrative work of the Army, and who had under him the Director General of Ordnance, the Director General of Supply and Transport and the Director General of

Military Works. This member therefore combined the functions of administration and supply, besides being the authority to whom the Commander-in-Chief had to refer for sanction all such proposals as required the orders of Government. Under this arrangement the Government of India had two military advisers. This system was abandoned in 1906 in favour of an arrangement under which a department of Military Supply was created and placed in charge of another soldier, with the rank of Major-General, who also had a seat on the Executive Council.

“ We do not think it necessary to enter into the merits of the controversy which resulted in this decision. In 1909 this department was abolished and the present system was introduced, under which all the work connected with the administration of the Army, the formulation and execution of the military policy of the Government of India, the responsibility for maintaining every branch of the Army, combatant and non-combatant, in a state of efficiency and the supreme direction of any military operations based upon India, are centred in one authority, the Commander-in-Chief and Army Member.”

The Esher Committee, when they came to frame their own recommendations, were definitely and unanimously of opinion that the Commander-in-Chief alone should have the right to offer military advice to the Government of India, and that he should have no military colleague on the Executive Council. They also regarded it as supremely desirable to abolish the duality of functions resulting from the same officer being the Commander-in-Chief and Member-in-charge of the Army Department: and were unanimous in thinking that the existing arrangements imposed too heavy a burden of work upon the Commander-in-Chief. In order to abolish the duality of functions, they proposed a complete unification of Army Headquarters and the Army Department, the latter ceasing to have the essential characteristics of a Department of the Government of India: and they agreed generally that the appropriate means of lightening the burden of work imposed upon the Commander-in-Chief was to create a separate authority, on whom should be placed the responsibility for the manufacture and provision of the stores required by the Army. They had considered and rejected, as unsuited to Indian conditions at the time, a pro-

posal to establish in India a Civilian Member of the Executive Council, responsible for the Army, and an Army Council with collective responsibilities.

They were, however, divided in their opinions as to the nature of the separate machinery to be created for the purpose which they had decided to approve. The majority of the Committee recommended that the production and provision of army supplies should be entrusted to a civilian member of the Viceroy's Executive Council, a new appointment of Member of Council being created for the purpose: while the minority held that production and provision should be entrusted to a civilian member of the Commander-in-Chief's Military Council,* subordinate to the Commander-in-Chief, who should be designated the Surveyor-General of Supply.

Of these several propositions, only one has been ratified, namely, that the Commander-in-Chief should continue to be the sole military adviser of the Government of India. It may be mentioned in this connection that the Legislative Assembly, by their vote on two resolutions discussed in March 1921, declared themselves opposed to the creation of either a Civil Army Member or a civilian Member for Army Supply. Accordingly, the Commander-in-Chief continues to exercise all the functions described in the concluding portion of the passage quoted above from the Esher Committee's report. In addition he administers the Royal Indian Marine and the Royal Air Force in India. The heads of the Budget which he controls are:—

48-Army.

Part A—Standing Army.

Part B—Auxiliary and Territorial Forces.

Part C—Royal Air Force.

49-Marine.

50-Military Works.

The details of the organization and functions of Army Headquarters are described elsewhere. The organization is founded upon the three Principal Staff Officers, the Chief of the general Staff, the Adjutant-General in India, and the Quartermaster-General in India, whose primary duty is to assist the Commander-in-Chief in the Executive side of his administration. There are other minor

**Army Headquarters—
The Principal Staff
Officers.**

* See page 54.

branches of the Army Headquarters staff, administered by officers who are not classified as Principal Staff Officers, but are not directly subordinate to any of the three Principal Staff Officers; namely, the Military Secretary, who was formerly on the personal staff of the Commander-in-Chief, but now, under a recommendation of the Esher Committee, is part of the organization of the Army Headquarters staff proper: the Director General of Ordnance, who is also directly under the orders of the Commander-in-Chief; and the Engineer-in-Chief who stands in a special relation, explained in a later chapter, to the Chief of the General Staff on the one hand and the Quartermaster-General on the other. The Director of Medical Services in India, who was independent before the war, is now included in the Adjutant-General's Branch; this also being the result of a recommendation of the Esher Committee.

Before the war the posts of Adjutant-General and Quartermaster-General were open to officers not below the rank of Colonel. The status of the appointments was raised in 1917, and they are now ordinarily held by officers of the rank of Lieutenant-General who have completed a tour of command in a first class district, and, by their great experience and authority, are in a position to relieve the Commander-in-Chief of a considerable burden of work.

The Principal Staff Officers and the other independent heads of Branches at Army Headquarters have two separate functions of a well-defined character. In one direction they are staff officers of the Commander-in-Chief, responsible for the administration of their departments of staff duties, for conveying to the subordinate commands the executive decisions of the Commander-in-Chief, and ensuring that these decisions are carried out. In their other aspect, they are responsible to initiate and pursue, under the direction of the Commander-in-Chief, proposals relating to the better administration of the army, and the welfare of the troops, which require the decision of the Government of India or the Secretary of State. It is here that the dual nature of the Commander-in-Chief's position manifests itself: because, when such proposals are ripe for submission to Government, they come before the Army Department, a Department organized in the same way and possessing the same functions and authority as the civil Departments of the Government of India, the portfolio being in charge of the Commander-in-Chief in his capacity as Army Member of His Excellency the Viceroy's Council.

The staff of the Army Department consists of a Secretary who, like the Secretaries in the civil departments, is a Secretary to the Government of India as a whole, possessing the constitutional right of access to the Viceroy: a Deputy Secretary, an Establishment officer and two Assistant Secretaries. Until 1921 the Army Secretary was a military officer usually of the rank of Major-General. The Esher Committee took exception to this feature of the system, as they considered that to vest in a military officer the constitutional authority of a Secretary to Government was liable to impair the independence of the Commander-in-Chief as the sole military adviser of Government: and by an indirect result of one of their recommendations the post is now held by a civilian, an arrangement which is not open to the same objection, and which, incidentally, is more in tune with the advance of political institutions in India. The Army Department deals with all army services proper, and also the administration of the Royal Indian Marine and the Royal Air Force in India, in so far as questions requiring the orders of the Government of India are concerned. The Army Department has no direct relations with commanders or troops or the staffs of formations subordinate to Army Headquarters: it has continuous and intimate relations with Army Headquarters in all administrative matters. The Army administration is represented in the Legislature by the Army Member in the Council of State, and by the Army Secretary in the Legislative Assembly.

The anomaly of the existing constitution of the High Command, as the Esher Committee viewed the matter, is that it permits in theory of a situation arising in which the Army Member might reject a recommendation which he had approved as Commander-in-Chief. It is needless to say that a situation of this kind does not in practice arise: one of the most effective working safeguards being the Military Council, an institution which, in its present form, is based upon a recommendation of the Esher Committee. The Military Council is composed of the Commander-in-Chief as President, and the following members, namely:—the Chief of the General Staff, the Adjutant-General, the Quartermaster-General, the Secretary to the Government of India in the Army Department, and the Financial Adviser, Military Finance, representing the Finance Department of the Government of India. It is mainly an advisory body, constituted for the purpose of assisting the Commander-in-Chief in the performance

of his administrative duties. It has no collective responsibility. It meets when convened by the Commander-in-Chief for the consideration of cases of sufficient importance and difficulty to require examination in conference. The heads of the minor independent branches of Army Headquarters and the directors of technical services attend when required. Accordingly, at an early stage in the consideration of any large question of policy, the Commander-in-Chief is in a position to obtain, by an extremely convenient procedure, a combination of authoritative advice on its military, administrative, and financial aspects, in the light of which he decides broadly the course of action he will maintain whether as Commander-in-Chief or Army Member.

Part II
Army Services



Chapter V—The Staff

THE staff is the establishment of officers employed at the headquarters of each higher military formation to assist the commander in carrying out his duties of command and administration. The staff of the Commander-in-Chief in India is known as the Army Headquarters staff.

Definition and Composition of "The Staff."

The officers appointed to the staff are specially selected officers, taken normally from among those who have graduated at the Staff Colleges at Camberley or Quetta. The Staff Colleges are institutions where officers, after passing a competitive entrance examination, undergo a course of instruction in advanced military science, and where they study the work of each fighting arm and of each administrative service and department of the army. No officer is posted permanently to the Staff. After a period of staff employment, limited as a general rule to four years, an officer returns to his unit for a tour of regimental duty, in order that he may keep in touch with regimental work, which it is essential that he should do. Moreover, no staff officer is trained solely for duty with one of the three branches of the staff: it is important that officers of each branch should be acquainted with the working of other branches, in order that they may know what assistance they can give and receive, and in order also to ensure the proper allocation of responsibility and to avoid overlapping of work. To obtain this result, arrangements are made for the periodical exchange of staff officers between the different branches of the staff.

Staff Duties.

The duty of a staff officer is—

- (a) To assist the commander in the execution of the duties entrusted to him, to transmit his orders and instructions to subordinate commanders and to the services, to make the necessary arrangements in connection therewith, and to see that those orders and instructions are carried out.
- (b) To give every possible assistance to the fighting troops and to the services in the execution of their tasks. (Field Service Regulations, Volume I.)

Organisation, and the functions of the several branches.

The staff is organized in three branches :—

- (a) The General Staff Branch.
- (b) The Adjutant-General's Branch.
- (c) The Quartermaster-General's Branch.

Efficiency in staff work, as in other things, depends upon a well-considered division of labour.

The General Staff Branch deals with military policy, with plans of operations for the defence of India, with the organization and distribution of the army for internal security and external use, in accordance with the policy of Government, with the collection and distribution of intelligence, with the supervision of the training of the army, with the use of the military forces in war, with war regulations, with the education of officers and other ranks, and with the inter-communication services.

The Adjutant-General's Branch deals with all matters appertaining to the raising, organizing and maintenance of the military forces, the peace distribution of the army, discipline, martial military and international law, medical and sanitary measures relating to the troops, personal and ceremonial matters, prisoners of war, pay and pension questions, recruiting, mobilization and demobilization.

The Quartermaster-General's Branch is concerned with the specification, provision, inspection, maintenance and issue of supplies, *i.e.*, food stuffs, forage, fuel, clothing, armaments, ammunition, equipment, general stores and material, and reserves of these articles, with the services responsible for the transportation, movement and quartering of troops, with the supply and transport service, military farms, armaments, military works, equipment and ordnance stores, with the remount and veterinary services and cantonment administration: and with garrison and regimental institutes.

The formidable character and extent of the list of duties assigned to the Quartermaster-General make it necessary to explain that since the war the responsibilities of the Quartermaster-General's Branch have increased to a far greater extent than those of any other branch of the staff. This is attributable specifically to the creation of new services, such as Mechanical Transport, and to the

fundamental change of policy by which, since the war, Indian troops are fed, clothed and mounted directly by Government, instead of under regimental arrangements.

Grading of staff at Army Headquarters. The various grades of staff appointments at Army Headquarters are—

General Staff.

Chief of the General Staff	(C. G. S.)
Deputy Chief of the General Staff	(D. C. G. S.)
Colonel-on-Staff, General Staff	(Col.-on-Staff G. S.)
General Staff Officer, 1st Grade	(G. S. O. 1.)
General Staff Officer, 2nd Grade	(G. S. O. 2.)
General Staff Officer, 3rd Grade	(G. S. O. 3.)

Adjutant-General's Branch.

Adjutant-General	(A. G.)
Deputy Adjutant-General	(D. A. G.)
Assistant Adjutant-General	(A. A. G.)
Deputy Assistant Adjutant-General	(D. A. A. G.)
Staff Captain	(S. C.)

Quartermaster-General's Branch.

Quartermaster-General	(Q. M. G.)
Deputy Quartermaster-General	(D. Q. M. G.)
Assistant Quartermaster-General	(A. Q. M. G.)
Deputy Assistant Quartermaster-General	(D. A. Q. M. G.)
Staff Captain	(S. C.)

In formations subordinate to Army Headquarters certain appointments are occasionally combined, so as to comprise duties appertaining to both the Adjutant-General's and Quartermaster-General's Branches. For appointments of this character, the following special grades have been prescribed:—

Deputy Adjutant and Quartermaster-General	(D. A. & Q. M. G.)
Assistant Adjutant and Quartermaster-General	(A. A. & Q. M. G.)
Deputy Assistant Adjutant and Quartermaster-General	(D. A. A. & Q. M. G.)

For each grading there is a stereotyped rate of pay.

The particulars which have now been given of the different categories of staff duties, and of the establishments employed to carry them out, supplement the more general description of the system of administration in Army Headquarters which has been previously given in Chapter IV. It was there explained that there are other minor branches of the Army Headquarters staff, administered by officers who are not classified as Principal Staff Officers, but are not directly subordinate to any of the three Principal Staff Officers.

These are:—

- (1) The Military Secretary, usually a Major-General, who deals with the appointment, promotion and retirement of officers holding the King's Commission, and the selection of officers for staff appointments.
- (2) The Director-General of Ordnance, also a Major-General, who controls the Ordnance factories. His functions are fully described in Chapter XV, which deals with the Ordnance services.
- (3) The Engineer-in-Chief, also a Major-General and head of the Corps of Royal Engineers in India. His functions are described in Chapter VIII which deals with the Royal Engineers.

In addition to the above, the Army Headquarters staff includes certain technical advisers, of whom the most important are the Major-General, Cavalry, and the Major-General, Royal Artillery. The duties of these two officers are to inspect and co-ordinate the training of the cavalry and artillery arms respectively, and to render advice to the General Staff Branch on technical questions connected with the administration of these arms and their employment in war. Both officers are attached to the General Staff Branch.

Further details of the organization of the Army Headquarters staff will be found in a simple graphic form in Appendix XII.

The staff in Commands and Districts is organized on the same lines as at Army Headquarters, and the allocation of duties is in exact correspondence. There are of course certain differences, one being that the lower the formation the fewer in number are the appointments and the lower is their grading; further, the work of the Adjutant-General's and Quartermaster-General's Branches is usually combined in one administrative staff officer. The composition of the staff of Com-

mands and Districts varies with the special requirements of each. The senior General Staff Officer in each Command is a Colonel-on-the-Staff, General Staff; whilst the senior administrative staff officer is a Deputy Adjutant and Quartermaster-General, holding in two of the Commands the rank of Major-General, and in the other two Commands that of Colonel-on-the-Staff.

Except in the case of certain 2nd class Districts, the senior General Staff Officer of a District staff is a General Staff Officer first grade, and the senior administrative staff officer is an Assistant Adjutant and Quartermaster-General. The staff of an Infantry Brigade consists of a Brigade-Major and a Staff Captain. A Cavalry Brigade has a Brigade-Major only.

Chapter VI

British Cavalry and Infantry

THE British cavalry and British infantry units of the army in India are units of the British service. No individual British service unit is located permanently in India. The story of those which serve in India from time to time belongs, therefore, to the story of the British Army, and the present account will be confined to the type of organization prevailing in the United Kingdom, and to such deviations from type as have been adopted to meet Indian conditions.

The British Army in India.

In the United Kingdom, in peace time, units are maintained at an establishment smaller than that required for war. The deficiencies on mobilization required to complete units to their war establishment are made good by means of reservists.

Establishments.

In India the position is different. Reserves of British personnel do not exist, and reinforcements must be obtained from the United Kingdom. It is obvious that the process of recalling reservists to the colours, equipping and despatching them to India must take time; and thus, until reinforcements can reach India from the United Kingdom—the interval is calculated at two months—British units in India must be self-contained. It is for this reason that in India the peace establishments exceed the war establishments.

Units of the British Army are detailed for a tour of foreign service, of which the major part is as a rule spent in India. In the

Reliefs. case of British infantry battalions the system is that one battalion of a regiment serves

in the United Kingdom and the other overseas, in order that drafting arrangements may be simplified, as will be explained later. The tour of overseas service of a British battalion is usually 16 years. In the case of British cavalry the same arrangement cannot be applied, as one unit only comprises the regiment. The normal tour of overseas duty for a regiment of British cavalry is 14 years.

British Cavalry.

In 1914 there were 9 British cavalry regiments in India, each with an establishment of 27 officers and 598 other ranks. Since

Pre-war and present strength. the war the number has been reduced to 6. The establishment of a British cavalry regiment is 27 officers and 571 other ranks. Thus the present total establishment of British cavalry in India is 162 officers and 3,426 other ranks, compared with a total establishment in 1914 of 243 officers and 5,382 other ranks.

In order to replace time-expired soldiers and casualties, an annual draft is sent from the United Kingdom to each unit whose turn for relief has not come. **Drafts.** Recruits for the British cavalry are trained at the Central Cavalry Dépôt at Canterbury, for fourteen weeks, in dismounted work and education only. They are then sent to regiments in the United Kingdom, where their training is carried on until such time as drafts are prepared for regiments serving overseas.

Organization. The present organization of Cavalry Regiments is:—

Regimental Headquarters.

Headquarter Wing composed of—

- No. 1 Group . . . Signallers.
- No. 2 Group . . . Machine Gun Troop.
- No. 3 Group . . . Administrative Troop.
- No. 4 Group . . . Band Troop.

3 Service Squadrons, each of 3 Sabre Troops and 1 Hotchkiss Gun Troop.

Each Sabre Troop has 3 sections, and each Hotchkiss Gun Troop is equal to 3 guns.

In the United Kingdom the establishment contains 13 fewer men and 200 fewer horses than in India.

This organization provides for specialists, such as signallers and machine-gunners, being collected in the Headquarter Wing. Under the previous organization each of the squadrons had, when required, to provide specialists. Obvious advantages accrue from the present organization, in which peace and war procedure are assimilated.

The regimental Headquarters consist of the Commandant, who is a Lieutenant-Colonel, with a Major, the adjutant, and the quartermaster. The Headquarter Wing is commanded by the senior Captain, assisted by four squadron officers, *i.e.*, one Captain and three Lieutenants.

Each of the three Service Squadrons is commanded by a Major, assisted by five squadron officers. The Squadron consists of

Squadron Headquarters (two officers and sixteen other ranks), and four Troops. Each Troop is commanded by a Lieutenant.

British Infantry.

In 1914 there were 51 British infantry battalions in India, each with an establishment of 28 officers and 1,003 other ranks. Since the war the number of battalions has been reduced from 51 to 45. The strength of each battalion up till 1923 was 28 officers and 1,012 other ranks. As a result of the recommendations of the Indian Retrenchment Committee, the establishment has recently been reduced by 130 other ranks per battalion. Thus the present number of British infantry battalions in India is 45, each with an establishment of 28 officers and 882 other ranks, or a total of 1,260 officers and 39,690 other ranks, compared with a total, in 1914, of 1,428 officers and 51,153 other ranks.

As mentioned previously, one battalion of a regiment serves overseas, whilst the other remains in the United Kingdom. The

Drafts.

latter functions as a training battalion for the overseas battalion. As in the case of British cavalry, an annual draft is prepared by the Home battalion and despatched to the overseas battalion, in order to make good any wastage that may have occurred during the past year.

Each infantry regiment has a Depôt in the United Kingdom, which is commanded by a Major selected from the battalion serving at home. The Depôt is situated in some suitable town in the area from which the regiment is recruited. The chief functions of a Depôt are the training of recruits, the custody of reservists' equipment, and the reception of reservists on mobilization.

All recruits on first enlistment are sent to the Depôt of the regiment for which they enlist. There they are clothed and equipped, receive instruction in drill and elementary musketry, and are taught discipline and the general duties of a soldier.

Until 1923 recruits remained at the Depôt for a period of three months, after which they were posted to the home battalion of their regiment, where they were again instructed in barrack square drill and elementary collective training, and were put through a recruit's course of musketry. Not until they had completed this further period of drill and musketry did they take their place in their company.

A reorganization of Depôts of Infantry of the Line has now taken place, which, in the terms of the Army Order which introduced it, had in view the following objects:—

- (a) The adoption of such a syllabus and period of training of recruits as will permit of—
 - (1) The completion of the individual recruit training of infantry recruits at the regimental Depôt.
 - (2) Infantry recruits receiving at the regimental Depôts such elementary collective training as will fit them to take their places in a platoon of a battalion serving at home.
- (b) The provision of a nucleus to provide the machinery for the training of reinforcements during war.
- (c) The custody of reservists' equipment and the reception of reservists on mobilization.

Under the syllabus of training now introduced, the recruit remains at the Depôt for about five months, and joins his battalion after having fired his recruit's course of musketry and having received such instruction in drill and elementary collective training as will enable him to take his place at once in the ranks of his company. On reaching his battalion, his military instruction is continued until such time as the annual draft for the overseas battalion is prepared, when, if he is required, he is drafted overseas.

It may perhaps be of interest to mention at this point a discussion which took place in the years immediately preceding the Great War, and which led to a far-reaching reorganization of the infantry.

Organization.

Prior to 1914 there was considerable discussion, and wide difference of opinion as to the desirability of maintaining eight smaller companies as opposed to four of double the strength. The larger company was maintained in the chief continental armies. Under the eight-company organization the average strength of a company was 120 other ranks.

The chief arguments against the adoption of four companies, each of approximately 240 other ranks, were:—

- (a) with so large a company the commander would have great difficulty in getting to know his men personally;
- (b) 240 was too large a number to be commanded effectively by one man in the field.

The arguments in favour of the four-company organization were:—

- (a) Owing to the number of men who were always absent from their companies, on specialist or other duties within the battalion, or were extra-regimentally employed, the companies were never, even approximately, at full strength. Companies at home were particularly weak when at training, owing to a large number of men being always at recruit drill or recruits' musketry. Abroad, the actual strength of a company at training was seldom more than 80, while at home it was sometimes as low as 20 or 30. It was thus frequently difficult for a company commander to exercise his junior officers and non-commissioned officers, owing to lack of men for them to command.
- (b) In the absence of the company commander, the command of a company more often than not devolved upon a very junior officer.
- (c) For purposes of administration within the battalion it would obviously be easier for the commanding officer and his staff to deal with four units than with eight.

In the United Kingdom in 1912, although the eight companies were still maintained, two companies were grouped together under one commander during all periods of training. The forming of double companies for training was adopted in India in 1914. These preliminary trials of the four-company organization having been successful the organization was definitely adopted just before the outbreak of the War.

The battalion is the unit of the British infantry. In this respect the British differs from the continental system, under which the regiment, composed of several battalions, is treated as a whole for administrative purposes and is usually together. In the British infantry, battalions are grouped in regiments for the purposes of recruitment and mutual support, but there is no regimental commander. Battalions are quartered singly and are entirely self-contained and independent units.

A battalion is commanded by a Lieutenant-Colonel, who has a headquarter staff, consisting of a second-in-command of the rank of Major, an adjutant and a quartermaster. Up to 1914, when a battalion consisted of a headquarters and eight companies, each

company was commanded by a Major or Captain. The establishment of officers, excluding the headquarters staff mentioned above, was:—

At home—2 Majors, 6 Captains and 12 subalterns.

Abroad—2 Majors, 6 Captains and 16 subalterns.

The subalterns were all allotted to companies; but among them there were always two specialist officers, the machine gun officer and signalling officer, and, during field training, a transport officer. These officers did duty with their companies when not employed on their special duties. The senior non-commissioned officer in a company was the colour-serjeant, whose duties were both executive and administrative. He attended all parades, was responsible for drill and discipline, assisted the company commander in the training of the company and, in addition, kept the company pay list, and dealt with other administrative matters such as clothing and equipment, messing, barrack furniture, etc.

Under the four-company system, each company is commanded by a Major or Captain, with a Captain as second-in-command. Instead of a colour-serjeant, each company has a company serjeant-major who is concerned with drill, discipline, detailing of non-commissioned officers for duty, training, and, in fact, all executive matters; and a company quartermaster-serjeant who deals with pay, messing, clothing and equipment, and everything connected with administration. The former small company was divided into four sections, each commanded by a non-commissioned officer; the present company is divided into four platoons each of four sections. Under the old system, the subaltern officer had no definite permanent command, but merely assisted the company commander. Under the present system, a subaltern officer is definitely assigned to the command of a platoon.

Immediately before the war, as previously stated, a battalion was composed of a headquarters and four companies; but there was no headquarters unit, and every man of the battalion belonged to a company, whether employed on headquarter duties or not. In peace time there are always many men who do not do duty with a company, such as those who are employed on services for the battalion as a whole, *i.e.*, quartermaster stores personnel, police, sanitary personnel, orderly room staff and specialist personnel, *i.e.*, machine gunners, signallers, bandsmen and buglers or drummers. In the war the band was not maintained as such, but its personnel became stretcher bearers, and there were also battalion bombers,

scouts, snipers and transport personnel who, in addition to the others mentioned, formed part of a battalion headquarters. When a battalion is engaged in active operations, it is essential that each of its sub-units should be self-contained; since, when actually fighting or in billets, companies and headquarters personnel are liable to be more or less dispersed. In these conditions, it was manifestly impossible for headquarters personnel to be either accommodated or messed with their companies, and it became necessary to maintain a headquarters of a considerable size separate from any company.

The war organization of an infantry battalion, therefore, now comprises a headquarters, a headquarter wing and four companies. The details of this organization are given in *Infantry Training*, Volume I. 1922. As it is essential that peace organization should approximate as nearly as possible to that required in war, peace establishments are framed to correspond closely with war establishments, in order that units may be transferred from a peace to a war footing with the minimum of dislocation. The peace establishment of an infantry battalion, therefore, consists now of a headquarters, headquarter wing and four companies.

The headquarters comprises only the four headquarter officers—commanding officer, second-in-command, adjutant and quartermaster.

The headquarter wing is divided into four groups, numbered from 1 to 4 as in war establishments, composed of the following:—

- | | |
|---------------------|---------------------------|
| No. 1 Group | Signallers. |
| No. 2 Group | Machine gun personnel. |
| No. 3 Group | Administrative personnel. |
| No. 4 Group | Band. |

This follows as nearly as possible the war establishment, in which No. 1 Group is composed of the personnel which accompanies headquarters into action, No. 2 Group remains the Machine gun group, No. 3 Group the administrative group and No. 4 Group becomes the transport group, the bandmen being turned into stretcher bearers. The headquarter wing is commanded by the senior Machine gun officer—a Major or Captain—and has in addition three subaltern officers—the signalling officer and two machine gun officers.

It may be noted that the experience of the recent war entirely dispelled the idea that a four-company organization was undesirable, because a company some 200 strong could not be controlled

effectively in action by one man. It was proved again and again that, under modern conditions of war, once a company has been launched into action, comprehensive control by the company or platoon commander often becomes impossible; and the subsequent success of the company depends upon the initiative of junior non-commissioned officers or even of individual soldiers.

In 1921 an important change was made in the composition of a British infantry battalion in India, by the inclusion of a proportion of Indian combatant ranks. Battalions had always maintained a quota of

**The Indian platoon
in British infantry.**

Indian followers; but, up to 1921, the combatant personnel was entirely British. In 1921, on the abolition of the Machine Gun Corps, eight machine guns were included in the equipment of a British infantry battalion. These guns are carried on mules, which are driven, looked after and taken into action by Indian combatant personnel. The peace establishment of Indian combatant personnel is fixed at one Indian officer and forty-one Indian other ranks.

The Indian platoon, as it is called, is transferred *en bloc* to another British battalion when the battalion to which it was originally attached proceeds on relief out of India. Men for this Indian establishment are recruited and trained at the Machine Gun Drivers' Training Company, which forms a part of the 10/17th Dogra Regiment at Jullundur. This institution performs, in regard to the category of personnel for which it is responsible, the functions carried out by training battalions for active battalions of Indian infantry and pioneers.

Chapter VII—Royal Artillery

THE categories of artillery employed in India before the war, and their organization, were as follows:—

Horse Artillery.—Three brigades, each consisting of headquarters and two batteries, and five unbrigaded batteries. Each battery was armed with six 13-pounder guns. Nine battery ammunition columns were also maintained.

Field Artillery.—Fifteen brigades, each consisting of headquarters and three batteries. Each battery was armed with six 18-pounder guns or six 4.5" howitzers. All three batteries in each brigade were armed alike. Twelve brigade ammunition columns were also maintained.

Heavy Artillery.—Three brigades, each consisting of headquarters and two batteries. Two batteries were each armed with four 30-pounder guns, two with four 4" guns, and two with four 5" guns. The 30-pounder and 4" batteries had horse draught for guns and for one ammunition wagon per gun, the remainder of the ammunition being carried in carts with bullock draught. The 5" batteries were all bullock draught.

Mountain Artillery.—Three brigades of British Mountain Artillery, each consisting of headquarters and two batteries, and two unbrigaded batteries.

Four brigades of Indian Mountain Artillery, each consisting of headquarters and two batteries, and four unbrigaded batteries.

Each battery was armed with six 10-pounder guns.

Garrison Artillery.—The garrison artillery consisted of a number of sub-categories of artillery, allotted to coast defence, the defence of certain frontier posts and other defended posts inland. The units were all immobile. The type of armament varied, but usually consisted of one kind or another of heavy ordnance.

Peace Establishments.

The pre-war peace establishments appear in Appendix XVII.

The chief defects of the organization described above were that it lacked homogeneity; the so-called "heavy" artillery was inadequate and obsolete in type; and the provision of field howitzer equipments was inadequate. It will be seen also that very few Indian other ranks were employed in Royal Horse and Royal Field Artillery batteries before the war. Further, all recruiting of Indian ranks for artillery was carried out by units, and consequently on mobilization there was no machinery for the recruitment of Indian ranks as reinforcements for units in the field.

Before proceeding to recount the modifications in artillery establishments introduced after the war, it is necessary to explain

The organization of an Artillery unit in detail. the system on which an artillery unit is built up.

Artillery establishments vary widely in nature. As we have seen, in the pre-war artillery, there were five main groups—Horse, Field, Heavy, Mountain and Garrison—most of which contained further sub-divisions with their own peculiar armaments and functions. Moreover the units in each of these numerous sub-divisions had their own establishments. But in the determination of a unit's establishment certain main principles are of universal application. The field artillery formed the largest and most important group, and if, therefore, the structure of a field battery establishment is explained, it is possible to arrive at a very fair understanding of the method by which artillery establishments are determined as a whole.

The field battery has two establishments; its war establishment, or the strength at which it mobilizes and proceeds on field service; and its peace establishment or its authorised strength in peace, which is based on its war establishment. The war establishment of the pre-war field battery was built up from its smallest self-contained tactical sub-unit. This was the sub-section. The sub-section consisted of a gun with limber, and two ammunition wagons. For the gun and for its two wagons, three 6-horsed teams were required. The strength of the personnel of the sub-section was decided by the number of gunners required to work the gun, and by the number of drivers required to manage the teams. In addition, certain further personnel and animals were necessary for the two G. S. wagons allowed, one to each flank sub-section, for battery stores, for battery staff (see below), and as spares. The total so arrived at was the establishment of the sub-section, the minimum strength below which it must not be allowed to fall if it is to carry out its rôle efficiently.

Two sub-sections went to form a section. This section was commanded by a subaltern officer. Three such sections went to form the battery. The battery was commanded by a Major, who had a battery staff consisting of a second-in-command (a Captain), a serjeant-major, a quartermaster serjeant, signallers, trumpeters, etc. But the personnel and horses of this battery staff were not separately constituted in a permanent battery headquarters: they were distributed among the six sub-sections of the battery whence they were drawn as required. Thus the establishment of a battery was the sum total of the establishments of its three sections.

In 1914, the whole personnel of a field battery was British with the exception of ten Indian drivers, who were employed in driving the two G. S. wagons allotted for the carriage of stores, and two Indian shoeing-smiths.

In 1920, under instructions from the War Office, the designations "Heavy" and "Mountain" artillery were changed to "Medium" and "Pack" artillery respectively: and in 1921, as the result of the experience of the Great War, the artillery was reorganized as follows:—

Royal Horse Artillery.—One brigade consisting of headquarters and three batteries and ammunition columns, and one brigade consisting of two batteries and two ammunition columns. All batteries were armed with six 13-pounder guns.

Royal Field Artillery.—Eleven brigades, each consisting of headquarters and four batteries. Of these brigades, five had each two batteries of six 18-pounder guns and two batteries of six 4.5" howitzers. The high proportion of howitzers to guns was adapted to the peculiar nature of the terrain in which the brigades were likely to operate in war. The remaining six brigades had each three batteries of six 18-pounder guns and one battery of six 4.5" howitzers. This is now the normal composition. Four divisional ammunition columns were maintained for the ammunition supply of eight brigades. For the supply of the remainder, three brigade ammunition columns were maintained.

Medium Artillery.—Three brigades, two consisting of four batteries and one of three batteries.

Nine of the batteries were to be armed with six 6" howitzers, 26 cwt., and two batteries with six 60-pounders. Two of these batteries were horse drawn and the remainder tractor drawn.

Pack Artillery.—Six brigades, each consisting of headquarters, one British battery and three Indian batteries; also one unbrigaded Indian battery (for duty in Burma).

Each battery had four guns. The one British and two Indian batteries in each brigade were to be armed with 3.7" howitzers, and one Indian battery with 2.75" guns.

Coast Artillery.—One headquarters and two companies at Bombay, and one company each at Fort William, Karachi and Rangoon.

Frontier Garrison Artillery.—One corps manning 12 posts.

Indian Coast Artillery.—One corps with detachments at four coast defence stations.

Training Centres.—One centre for Indian ranks of Horse, Field and Medium Artillery, and another centre for Indian ranks of Pack Artillery. These centres were created for the recruitment and training of Indian personnel required for batteries.

The important features of change in the reorganization of 1921, features which were maintained in the final reorganization of 1923, were as follows:—

- (a) In each branch of the artillery, batteries were placed on a uniform establishment. Problems of maintenance, relief, and training were in this way greatly simplified.
- (b) In the Royal Horse and Royal Field Artillery a considerable admixture of Indian ranks had been made, and machinery had been created to provide for maintenance in war.
- (c) In the Field Artillery, 18-pounder and 4.5" Howitzers Batteries were placed in the same brigade, in the proportion of 3 to 1 or 2 to 2.
- (d) Tractor drawn Medium Artillery, armed with an up-to-date weapon (6" howitzer, 26 cwt.) had been introduced.
- (e) The pack artillery howitzer (3.7") had been introduced, which greatly increased the efficiency of this arm; and the Pack Artillery was organized in mixed brigades of one British and three Indian batteries.
- (f) The inland fort companies of Royal Garrison Artillery had disappeared and the number of coast defence

companies had been reduced. These companies, consisting as they did entirely of British personnel, were exceedingly expensive. The duties of the inland fort companies were now to be carried out by the non-mobile sections of medium batteries or by infantry or Auxiliary Force detachments.

The peace establishment of artillery must, as in other arms, bear a definite relation to its war establishment. The primary

The adjustment of peace and war establishments in the reorganization of 1921.

and universal requirement is that the peace establishment must contain a sufficient margin to provide with absolute certainty that each unit will be able to mobilize at war

strength and to meet certain additional demands which mobilization entails. In the case of the artillery arm, it was a matter of some difficulty to combine the technical reforms, enjoined by the lessons of the Great War, with ample peace establishments, if a reasonable limit of cost were not to be exceeded. There were two possible expedients, one being to reduce the war establishment below the strength theoretically desirable, the other being to form a reserve in India to meet war wastage. Actually both these methods were employed: and the result upon the organization of a field battery, which may once more be taken as a typical example, was as described in the following paragraphs.

It has been shown that a war establishment is built up from the smallest sub-unit, *i.e.*, the sub-section, the strength of which could not be reduced. The only alternative, therefore,

Reduction of war establishment.

was to reduce the number of sub-sections which went to constitute the battery.

This was done and under the present system a field battery mobilizes with two sections only (four sub-sections). The remaining section of the peace establishment is available for reinforcement, or for internal security duties on a reduced establishment.

The pre-war field battery was almost entirely a British unit: and any reserve which is maintained in India must necessarily be

Reserve.

Indian. It was essential, therefore, to employ a considerable proportion of Indian

ranks in the field artillery establishments if a reserve were to be created. This step was accordingly decided upon.

Indians are now employed as drivers and artificers in the Royal Horse and Field Artillery and in medium batteries, and as drivers, gunners and artificers in the Pack Artillery. In the Frontier

Garrison Artillery they are employed as gunners and artificers and in the Indian Coast Artillery as gunners only.

In 1923, the Indian Retrenchment Committee recommended that the cost of the Artillery should be reduced by 10 per cent.

The recommendations of the Retrenchment Committee of 1922-23 and the resulting reductions in the artillery.

The recommendation was accepted by the Government of India and to effect the saving, the following measures were decided upon:—

- (i) The abolition of 1 Royal Horse Artillery battery and its ammunition column.
- (ii) The reduction of first line ammunition wagon teams in Royal Field Artillery batteries from 6 horses to 4 horses.
- (iii) The reduction of 3 British signallers in all batteries of artillery.
- (iv) The abolition of 1 Royal Field Artillery brigade ammunition column.
- (v) The reduction of the reinforcement brigade Royal Field Artillery to a low 4-gun establishment
- (vi) The reduction of three brigades Royal Field Artillery to a 4-gun establishment, sufficient gunner personnel being retained to man guns for internal security purposes. The 2 guns for internal security will be transported in emergency by lorries.

The total reduction of personnel effected was:—

British officers	23
British other ranks	993
Indian officers	4
Indian other ranks	827
Followers	568
Horses	1,731
Guns and Vehicles	120

The peace organization of artillery 1923.

The amended peace organization of the artillery at the present day is consequently as follows:—

Royal Horse Artillery.—One brigade consisting of headquarters, three batteries and three ammunition columns, and one unbrigaded battery and ammunition column.

Each battery is armed with six 13-pounder guns.

Royal Field Artillery. Higher and Lower Establishment Brigades.—Seven brigades on the higher establishment, each consisting of headquarters and four batteries. Three brigades on the lower establishment, each consisting of headquarters and four batteries.

Of the seven brigades on the higher establishment, four brigades consist of two batteries, each armed with six 18-pounder guns, and two batteries each with six 4.5" howitzers. Three brigades consist of three batteries, each armed with six 18-pounder guns, and one battery with six 4.5" howitzers.

Of the three brigades on the lower establishment two consist of three batteries, each armed with six 18-pounder guns, and one battery with six 4.5" howitzers, and one brigade of two batteries armed with six 18-pounder guns, and two batteries armed with 4.5" howitzers. Two guns in each battery are immobile.

Royal Field Artillery, Reinforcement Brigade.—The reinforcement brigade consists of three batteries, each armed with four 18-pounder guns, and one battery with four 4.5" howitzers.

In war this brigade will be broken up to form the 3rd Divisional ammunition column.

Royal Field Artillery, Ammunition Columns.—Two Divisional ammunition columns are maintained for the artillery of the first and second divisions, and one brigade ammunition column for the covering force brigade on the frontier.

Pack Artillery.—Six brigades each consisting of headquarters, one British and three Indian batteries, also one unbrigaded battery and one section.

The British battery and two Indian batteries per brigade are armed, or in process of being armed, with four 3.7" howitzers; the remaining batteries are armed with four 2.75" guns.

Medium Artillery.—Two brigades, each consisting of one horse-drawn and two tractor-drawn batteries. In addition there are three tractor-drawn batteries, two armed with 6" howitzers and one with 60-pounder guns on a lower establishment, each with only one section mobile. For administrative purposes one of these lower establishment batteries is brigaded with each of the two Medium Brigades: the third battery (armed with 60-pounder guns) is unbrigaded. In each brigade, therefore, there are three tractor-drawn and one horse-drawn batteries: in one brigade the horse drawn battery is armed with 60-pounder guns, in the other with 6" howitzers.

Coast Artillery.—One headquarters and two companies at Bombay and Karachi, and one independent company at Calcutta.

Frontier Garrison Artillery.—One corps manning twelve posts. The posts are:—

Kohat.	Bannu.	Malakand.
Samana.	Dardoni.	Shagai.
Thal.	Peshawar.	Chakdara.
Chaman.	Hindubagh.	Fort Sandeman.

The corps is responsible for manning the armament allotted for the defence of these posts.

Indian Coast Artillery.—One corps with detachments at two coast defence stations, Bombay and Karachi. The rôle of this corps is to assist the coast defence companies of the Royal Garrison Artillery stationed at Bombay and Karachi in the less technical duties connected with the manning of the defences. A special section at headquarters performs launch and boat duties for the outlying forts at Bombay.

Artillery Training Centres.—The functions of the training centres have already been described. These functions remain unchanged.

Existing Peace Establishments.

The peace establishments, after effect has been given to the latest reductions, are shewn in Appendix XVII.

Chapter VIII

The Royal Engineers and the Engineer Services

SUCCESS in modern war is largely dependent upon the use of mechanical aids and contrivances, and the duties which the engineering services of an army are called upon to perform

are important and multifarious. Where troops are engaged in actual operations against an enemy, the engineers are required to overcome any obstacles preventing the rapid progress of the army, by constructing or improving roads, railways, bridges and other means of communication; and they have on the other hand to impede the progress of the enemy, by demolishing all facilities that exist for his advance, and by placing every possible obstacle in his path. In addition the engineers are required to construct such defences as are necessary, and to provide for the accommodation of the troops when in camp, this including all arrangements for water-supply, sanitation, and other essential services. Behind the scene of actual operations, that is to say, at the base, where food, stores and reinforcements are collected, and on the lines of communication, along which everything required by the fighting troops has to be supplied, the engineers have to arrange for defences, communications, hospitals, and hutted camps, and to instal, amongst many other requisities, pumping, electrical and ice-making machinery.

The duties of Engineers in War.

For the performance of these duties an exceptionally high standard of qualifications is necessary. The science of engineering has long passed the stage where one man can be expected to be an expert in every branch of the profession. A sound knowledge of all the main departments of engineering work is, however, demanded of the officer of the military engineering services: and he must also be acquainted with the organization of the army, its manners and customs, and its needs at all times. He must in fact be a trained soldier, possessing a knowledge of every aspect of the art of war. The military engineer has, moreover, special difficulties to contend against. The factors that enter into every engineering problem are time, labour, transport and materials. In ordinary civilian practice the engineer can think

out the problem at leisure: and, in arriving at the result, economy and permanent stability are all that he need look to: time is rarely of importance, while labour, transport and materials are easily obtained. With the military engineer in war, time is almost invariably the predominating and, as often as not, the vital factor, while labour, transport and material may have to be rapidly improvised from what is available at the moment. On the rapidity and success of his work there may depend the fate of an army. Even in the areas behind the zone of active operations, the engineer has usually to deal with new conditions, and he must be able to organize labour from personnel to whom the conditions of work may be as novel as they are to him. It is true that, for much of the work behind the fighting line, civilian engineers can be utilised, but even here the direction must lie in the hands of trained military engineers.

Such are the duties and responsibilities of a military engineering service. It is essentially a service which from its technical military character cannot be improvised in war, and must be maintained in a state of high efficiency during peace.

The engineer services in war are constituted in two main branches, namely, those required by the troops engaged in active operations against the enemy, and those required at the base and on the lines of communication. With the field army, field units are employed, the nature of which varies with the type of military formation they are required to serve. The personnel of field units, in addition to being engineers, must be fully trained and disciplined soldiers. Behind the fighting line it is feasible to employ units whose military training is negligible, while circumstances may at times permit of the work required being executed by local or imported civilian labour.

Division of the Engineering Services in war into two branches. The form in which the two branches exist in peace, namely, (a) the Sappers and Miners and Pioneers; and (b) the Military Works or Military Engineer Services.

The number of field engineer units maintained in peace depends upon the strength of the field army that it has been decided to maintain, and should contain also the means for expansion, to keep pace with the expansion of the field army. The field units in India consist of the Corps of Sappers and Miners, and a number of Pioneer Regiments.

Separately from the field units, it is necessary in war, as already explained, to provide the engineer personnel required to carry

out works at the base and on the lines of communication, and also to provide an engineer organization on the staffs of Divisions, Armies, and Army Headquarters, whose duty it will be to direct engineer operations and services, and to provide the engineer material required. For this second category of duties, and to bring up to war strength the companies of Sappers and Miners, it is necessary to maintain in peace a number of officers and subordinate personnel, who have been trained for the purpose: and these are employed in peace time in the Military Engineer Services, or, as they were formerly known, the Military Works Services, who are charged with the execution and maintenance of all engineer services required by the army in cantonments.

These are the principles on which the Engineer organization of the army consists of two main branches, *viz.*, the "Sappers and Miners" and "Pioneers" and the "Military Engineer Services." In war it is essential that both branches should be under one control in all military formations. In peace, unity of control is equally desirable in order to ensure adequate preparedness for war: and the system of peace administration of the Engineer services, which will be described later, has recently been reconstructed to this end.

The great majority of the officers employed in the military engineering organization in India are drawn from the Corps of

The Corps of Royal Engineers.

Royal Engineers, which, as is well known, is a part of the British Army. In the days of the East India Company, India maintained her own Indian Corps of Engineers, the officers for which were recruited and trained in England. This Corps was divided into three branches, one for each of the Presidencies of Bengal, Bombay and Madras. In 1860 the Indian Corps of Engineers was amalgamated with the Imperial Corps of Royal Engineers, and the system thus inaugurated continues to the present day. The history of the Corps of Royal Engineers is outside the scope of this book. Its fame, moreover, is widely known. The Corps has accompanied the British Army in all its campaigns for many centuries and its traditions are second to none. It shares with the Royal Artillery, with which it was once amalgamated, the proud motto—"Ubique, quo fas et gloria ducunt."

It is necessary, on the other hand, to describe the manner in which the Royal Engineer officer, who serves in India, is recruited

Recruitment and training of Royal Engineer officers.

and trained. Between the ages of $17\frac{1}{2}$ and $19\frac{1}{2}$ a candidate has to qualify, in a competitive examination, for admission to the Royal

Military Academy at Woolwich, where, if successful, he receives a training in military subjects for a period of two years. After a year at the Academy, cadets are divided into Engineer and Artillery cadets, and, on passing the final examination, the Engineer cadet receives a commission in the Royal Engineers. The young officer is then sent to the School of Military Engineering, where for two years he receives instruction in military engineering, and also in military subjects of a more advanced nature. He is then posted for duty with an Engineer unit in England or is sent on a tour of foreign service. In the case of India the tour is for five years, but, if an officer is suitable and willing, he is permitted to continue to serve in India and, after 18 years Indian service, he becomes eligible for an Indian Army pension. After completing a tour of service an officer is permitted, on giving six months notice, to revert to Home service.

On arrival in India, the young officer is attached to one of the Corps of Sappers and Miners for a few months, where he learns how to work with Indian troops. He is then permitted to elect for service in the Sappers and Miners or the Military Engineer Services, or he may be permitted to enter one of the civil departments of Government, *e.g.*, the Public Works Department, the Railway Department, the Survey of India or the Mints, where he obtains a varied experience of engineering work, and still remains available for war. Before promotion to Captain, every officer has to pass an examination in military engineering and military subjects: before promotion to Major, he again has to pass in military subjects, and before reaching the rank of Lieutenant-Colonel he must qualify for promotion at the Senior Officers School.

Up to the rank of Major, officers are interchanged between the Sappers and Miners and the Military Engineer Services, so as to ensure that their training both with troops and on the construction of works is kept up to date. When an officer in military or civil employ has served for at least 7 years continuously in India, and is prepared to continue to serve in India for a further period, he is sent to the School of Military Engineering for a further course in military training and engineering, in order that he may be acquainted with the latest developments in military thought and engineering practice. Officers are encouraged to undergo special courses in England on engineering subjects, more especially in electrical and mechanical work.

The following table gives the distribution (1923) of the Royal Engineer officers employed in India:—

Commands and Staffs of the Army	16
Sappers and Miners	110
Military Engineer Services	171
Survey of India	38
Railway Department	50
Public Works Department	16
Mints	4
Miscellaneous	5
Colonels and Lieutenant-Colonels on the unemployed list	6

The system of engineer organization and administration, which exists to-day, differs materially from the system obtaining in 1914.

The system of organization and administration of the Engineer Services in peace. when the principal functionary in the engineering services in India was the Director General of Military Works. As his designation implies, he was principally concerned with the construction of works and he was merely *ex officio* Inspector of Sappers and Miners. He had, however, the right of direct communication with the Commander-in-Chief on all questions affecting his department. The present system is the result of careful and prolonged study of the problems of engineer organization, as illustrated by the experience of the Great War in both the western and eastern theatres; and it was not evolved until trial had been made, after the war, of a structure the conception of which was fundamentally different.

The Army in India committee of 1919-20 recommended that the Director-General of Military Works should become a Director

The first reorganization of the post-war period. of Works subordinate to the Quartermaster-General, and that there should be a separate Inspector of Sappers and Miners and Pioneers under the Chief of the General Staff. The most striking feature of the scheme thus advocated was that it abolished unity of control over the engineer services. The recommendation was accepted by Government and the scheme was put into operation. It did not survive long. Royal Engineers did not like their new designation as Works officers, and regarded the position assigned to the engineering services as one of inferiority. It was contended that the loss of independence, and the absence of solidarity and

unified control, which the new system entailed, were liable to impair seriously the efficiency of the engineering organization.

Lord Rawlinson, before he became Commander-in-Chief, had been president of a committee assembled in England after the war to consider certain matters of importance connected with the organization of the Corps of Royal Engineers. Under his orders, as Commander-in-Chief, a further reform of the engineering services in India was undertaken. The scheme devised has recently received the approval of the Secretary of State. As the simplest method of describing its essential features, the following passages are reproduced from the Army Instruction (India) of the 4th December 1923 which brought it into force.

“ It has been decided, with the approval of the Right Honourable the Secretary of State for India, to organize the Engineer Services in India under an Engineer-in-Chief who will be borne upon the establishment of Army Headquarters, and will be directly responsible to His Excellency the Commander-in-Chief.

The reorganization of 1923.

The present system of administration and organization.

The Engineer-in-Chief.

“ The Engineer Services in India consist of the Corps of Sappers and Miners and the Military Works Services. The Corps of Sappers and Miners will continue to be administered as heretofore, but the Technical Adviser, Royal Engineers, (Colonel on the Staff, Royal Engineers), will become a Staff Officer of the Engineer-in-Chief. The Military Works Services will be designated the Military Engineer Services, and will cease to be administered as a directorate of the Quartermaster General's Branch. The Engineer-in-Chief will be the head of the Corps of Royal Engineers in India, and will retain all the powers and privileges that have from time to time been granted to the Director of Military Works, whose appointment is now abolished.”

“ The Engineer-in-Chief will not be a Staff Officer, but will be the technical adviser of His Excellency the Commander-in-Chief on all military engineering matters, responsible for:—

- (a) Engineer operations and engineer services during war and peace.
- (b) The preparedness for war of the engineering services.
- (c) The supply of engineer stores during war and peace.
- (d) The execution and maintenance of all military works.
- (e) The constructional efficiency, accuracy and economy of all projects and designs submitted by him.”

“ The Engineer-in-Chief will advise and take the orders of His Excellency the Commander-in-Chief, through the prescribed Staff Relations with the Officer at Army Headquarters, on the Staff at Army Headquarters, subjects enumerated below:—

A.—Through the Chief of the General Staff.

- (i) Engineer works immediately connected with war or manœuvres.
- (ii) Engineer preparation for war.
- (iii) Liaison with the civil engineering professions and their utilisation in war.
- (iv) Study and the development of all engineering possibilities, that may assist the Army in war.
- (v) Engineering Intelligence.
- (vi) Technical instruction in schools and the preparation of training manuals.
- (vii) Engineer training and the technical inspection of engineer and Pioneer units.
- (viii) War organization and establishment of engineer units.
- (ix) Scales and designs of engineer equipment and mobilization reserves of engineer stores.
- (x) Siting and design of fortifications, defences and strategic roads.

B.—Through the Adjutant-General.

- (xi) Peace organization and establishment of engineer units.
- (xii) Organization, pay, pensions, and conditions of service of all military personnel controlled by the Engineer-in-Chief.

C.—Through the Quartermaster-General.

- (xiii) Military Works policy and finance.
- (xiv) Engineer services during war, other than those immediately connected with operations, including the construction of railways, communications, harbour works, etc.
- (xv) Supply of engineer stores, other than those supplied by other services.

D.—Through the Military Secretary.

- (xvi) Demands on the War Office for completion of the Indian establishment, posting, reversion to British establishment, deputation, selection for all appointments of officers of the Corps of Royal Engineers in military and civil employ."

The establishment of officers attached to the Engineer-in-Chief.

"The Engineer-in-Chief will be assisted by:—

- (a) The Colonel on the Staff, Royal Engineers, who will deal with items (i) to (ix) and (xi) above, as well as with all questions concerning the Corps of Sappers and Miners and other engineer units.

In dealing with items (i) to (ix) the Colonel on the Staff, Royal Engineers, whilst keeping the Engineer-in-Chief fully informed of all his actions, will refer direct to the Chief of the General Staff. The Colonel on the Staff, Royal Engineers, will also be authorised to carry out technical inspection of engineer and Pioneer units.

- (b) The Deputy Engineer-in-Chief for works, who will deal with items (x), (xiii) and (xiv) above, as well as with all questions relating to the organization of the Military Engineer Services.

- (c) The Deputy Engineer-in-Chief, Electrical and Mechanical, who will deal with all questions concerning Electrical and Mechanical installations and services, and with the supply of engineer stores.

- (d) A Staff Officer, Royal Engineer, first grade, who will deal with items (xii) and (xvi) above, other than questions concerning the Corps of Sappers and Miners.

- (e) Additional staff officers as required."

"The Engineer-in-Chief will correspond direct with Engineer officers in formations, on technical matters, and is entitled to

Relations with subordinate military formations.

call for estimates and information, to enable him to submit proposals to Government, or to give advice to the Staff at Army Headquarters. In respect of the provision of accommodation and communications, and the allotment of funds, the Engineer-in-Chief will communicate the decisions of the Quartermaster General.

“ The relations between General Officers Commanding-in-Chief, Commands, and their Staffs on the one hand, and Chief Engineers on the other, will be analogous to the relations between His Excellency the Commander-in-Chief and the Army Headquarters Staff and the Engineer-in-Chief. The duties of Chief Engineer will in all respects be similar to the duties of the Engineer-in-Chief. In the Northern Command, the Chief Engineer will be assisted by a Staff Officer, Royal Engineers, first grade, whose duties will correspond to those of the Colonel-on-the-Staff, Royal Engineers. In other Commands these duties will be performed by the Chief Engineer. Chief Engineers will be provided with the staff separately prescribed.”

“ For the conduct of the Military Engineer Services, there will be a Commanding Royal Engineer, 1st class, for each of the Peshawar, Rawalpindi, Lahore, Baluchistan, Waziristan, United Provinces, Poona, Central Provinces and Madras Districts, and Commanding Royal Engineers, 2nd class, for the remaining second class military districts, and Assistant Commanding Royal Engineers for Military Engineer Services sub-districts. These officers will not be responsible for the engineer training of troops. They will be assisted by garrison engineers as may be found to be necessary.

Assistant Commanding Royal Engineers, Commanding Royal Engineers and Chief Engineers will be responsible, respectively, to Commanding Royal Engineers, Chief Engineers and the Engineer-in-Chief, for the accuracy and economy of all designs submitted by them, and for the technical execution of works and the maintenance of roads and buildings in their area.”

The system of organization described in this extract explains itself. It embodies in the clearest manner possible the principle of unification to which reference has previously been made, and no further comment is necessary. The structure at Army Headquarters and at the Headquarters of Commands is further illustrated in graphic form in Appendices XIII, XIV and XV.

The need for employing special engineer units as part of an army arose from the inability of the infantryman to overcome an enemy, who was entrenched behind strong fortifications, where sapping and mining was needed under the direction of skilled engineers. In the early days of the Indian Army, engineer units were raised by detaching selected men from other units, and these

Sappers and Miners. A Retrospect.

temporary units were broken up on the close of the operations. At the commencement of the nineteenth century, it was found to be more convenient to retain these units in peace as pioneer regiments, and they developed later into three Corps of Sappers and Miners, one for each of the three Presidencies, Bengal, Madras and Bombay. These three corps have survived to the present day, though their titles and organization have been varied from time to time. They are known as—

King George's Own Bengal Sappers and Miners, with headquarters at Roorkee.

Queen Victoria's Own Madras Sappers and Miners, with headquarters at Bangalore.

Royal Bombay Sappers and Miners, with headquarters at Kirkee.

Recently the Burma Company of Sappers and Miners has been detached from the Madras Corps as the Burma Corps of Sappers and Miners, with headquarters at Mandalay. Since their formation the Sappers and Miners have accompanied the Indian Army in all its wars, and a reference to the Indian Army List will show the battle honours they have earned. Their traditions are equal to those of any unit in the Indian Army. During the Great War the three corps were called upon to train, provide, and maintain numerous engineer units in France, Palestine, Iraq, Aden, East Africa and the North-West Frontier of India. The great expansion which took place is shown by the fact that the establishment of King George's Own Sappers and Miners alone rose from 1,700 in 1914 to 10,000 on Armistice day 1918.

The Pioneers of the Indian Army are dealt with in Chapter X. The British Army possessed no Pioneer battalions in 1914, but following the example set by India, a pioneer battalion was raised for every division of infantry during the war. After the war it was decided to amalgamate the Pioneers with the engineer units (field companies) allotted to a division. The process was not applied to the Indian Army, since the high traditions of the Indian Pioneers were worth preserving.

The Organization of the Sappers and Miners. The composition of the Corps of Sappers and Miners is as follows:—

King George's Own Bengal Sappers and Miners.

Headquarters and 3 Depôt Companies.

2 Field Troops.

- 6 Field Companies and the Chitral Section.
- 1 Army Troops Company.
- 1 Bridging Train.
- 2 Divisional Headquarters Companies.
- 1 Printing Section.
- 1 Photo-Litho Section.
- 2 Defence Light Sections.

Queen Victoria's Own Madras Sappers and Miners.

- Headquarters and 3 Depôt Companies.
- 2 Field Troops.
- 5 Field Companies.
- 2 Army Troops Companies.
- 1 Divisional Headquarters Company.
- 1 Printing Section.
- 1 Photo-Litho Section.

Royal Bombay Sappers and Miners.

- Headquarters and 3 Depôt Companies.
- 6 Field Companies.
- 1 Fortress Company (Aden).
- 1 Divisional Headquarters Company.
- 2 Railway Companies.
- 1 Printing Section.
- 1 Photo-Litho Section.
- 2 Defence Light Sections.

Burma Sappers and Miners.

- Headquarters and one Depôt Company.
- 1 Field Company.
- 1 Defence Light Section.

The personnel of the corps consists of Royal Engineer officers, Indian officers holding the Viceroy's commission, a certain number of British non-commissioned officers, Indian non-commissioned officers and Indian other ranks. The first three Corps are commanded by a Lieutenant-Colonel, who is assisted by two Majors, as

Superintendents of Park and Instruction, an Adjutant, a Quartermaster, two Subadar-Majors, a Jemadar Adjutant and a Jemadar Quartermaster. The staff of the Burma Sappers and Miners is proportionately less.

Field Troops are mounted units, trained to accompany cavalry, and are equipped to carry out hasty bridging, demolition and water supply work. Field companies are trained

Types of units. to accompany infantry. Divisional headquarters companies are small units containing highly qualified "tradesmen," and are trained to carry out technical work in connection with field workshops. Army Troops companies are somewhat smaller units than field companies: they are required to carry out work behind divisions, under the orders of Chief Engineers, *e.g.*, heavy bridging work, large water-supplies, electrical and mechanical installations. The Bridging Train comprises a sufficient number of pontoons to make a number of floating bridges.

The training of the Sapper.

The training of the Indian sapper falls under three heads:—

- (a) Infantry training, which includes drill, musketry and physical training.
- (b) Training in military engineering, which includes field defences, demolition, bridging, encampments, water-supply, etc.
- (c) Trades training as masons, bricklayers, blacksmiths, fitters, carpenters, etc., for which purpose each Corps is equipped with workshops.

It will be obvious that a trained sapper cannot be produced at short notice: and the full period of training is two years. For this reason it is essential that there should be no difference between the peace and war establishments of a Sapper and Miner unit. During war the training is reduced to nine months, and a reserve is maintained to provide for the reinforcements needed during the first nine months of war. The probable demand for reinforcements is calculated at 1,627, but at present the establishment of the reserve, for financial reasons, has been reduced to 920.

The organization of Pioneer battalions is dealt with in Chapter X. The pioneer is not a "tradesman." He is trained in elementary field engineering, more especially in road construction.

Organization of training of Pioneers.

The history of the Military Engineer Services has an interest of its own. In the eighteenth century and the earlier part of the nineteenth century, the engineering requirements of the army preponderated over those of other departments, and, as conditions became more stable, there came into being a Public Works Department under the control of the "Military Board." The department was manned by the Indian Corps of Engineers, who were entirely military in character. Civil works gradually began to assume a greater importance, notably with the construction of the Grand Trunk Road from Calcutta to Delhi, and of the Ganges Canal from Hardwar to Cawnpore; civilian engineers commenced to be employed in increasing numbers: and provincial Governments began to be dissatisfied with the military control over works executed on their behalf. In 1851 the Public Works Department was brought under civil control, but no separate organization was believed to be necessary for military works, as it was considered to be more economical for the same agency to execute both military and civil works. After 1860 there was a boom in the construction of civil works: the Public Works Department was greatly expanded and large numbers of civilian engineers were engaged. In course of time the Military Department found that they suffered from the loss of control over military works; funds were not expended as they desired and barracks fell into disrepair. Matters were brought to a head by the failure of barracks at Saugor, Allahabad, Jubbulpore and elsewhere, and in 1871 the control of large military works, as well as all military works in the cantonments in Bengal, were placed in charge of a Military Works Branch of the Public Works Department under an Inspector General of Military Works. But it was not until 1881 that the control of the Military Works Branch or Department, as it now was called, became vested in the Military Department, and it was not until 1889 that this department took over all military works in India. In 1899 the Public Works Department system of grading officers, which clashed with the system of military rank, was abolished, and the Military Works Department became entirely military in character. The department was then designated the Military Works Services, and its head the Director-General of Military Works. The later evolution of the higher

**The Military Engineer services.
A Retrospect.**

Civil control.

1871.—The Military Works Branch of the Public Works Department.

1881.—Assumption of military control.

The Military Works Services.

organization of the department and the process by which it acquired its present title "the Military Engineer Services" have been described in an earlier part of this chapter.

The Military Engineer Services.

The Military Engineer Services are divided into 3 branches, viz., "Buildings and Roads," "Electrical and Mechanical" and "Stores."

Organization of the Military Engineer Services.

The unit in the Buildings and Roads branch is the sub-division, which is in charge of a Sub-divisional officer (Military or Civilian upper subordinate), who is assisted by one or more Sub-overseers (lower subordinates, civilians). Two or more sub-divisions are grouped under a Garrison Engineer. The unit in the Electrical and Mechanical branch is the power station, ice factory, water-supply, group of road rollers or workshops, and one or more units are grouped under a Sub-divisional officer, who is supervised by a Garrison Engineer. The Stores branch deals with engineer stores and barrack furniture. For every sub-district store there is a storekeeper, and for every sub-district there is a Barrack Master (Commissary, Deputy or Assistant Commissary, ranking from Major to Lieutenant) or an Assistant Barrack Master (warrant officer), assisted by two or more Barrack Serjeants, who deal with the supply of barrack furniture to troops. At Lahore there is a Command Park for the supply of engineer stores, and at Roorkee there is a Command workshop for minor manufacture and repair work.

The Military Engineer Services control all military works in India, Burma, the Persian Gulf, and Aden, except in the case of a few small outlying military stations, which are in charge of the Public Works Department. They control all works for the Royal Air Force and for the Royal Indian Marine: and they are charged with all civil works in the North-West Frontier Province and Baluchistan, under the orders, in each of these two areas, of the Chief Commissioner and Agent to the Governor General. They also control civil works in Bangalore, under the Mysore Government, and in Aden.

Chapter IX—Indian Cavalry

IN 1914 there were in the Indian Army thirty-nine regiments of cavalry, besides the Bodyguards of His Excellency the Governor General and Their Excellencies the Governors of Madras, Bombay and Bengal, and the Aden Troop, which is maintained for local service in Aden.

Pre-war strength and organization.

Two systems of organization were in force, known as the silladar and non-silladar systems.

The non-silladar system was, generally speaking, the same as the system of organization employed in the British Cavalry. Three only of the thirty-nine Indian Cavalry regiments were organized on this system; these were the 26th King George's Own Light Cavalry, the 27th Light Cavalry and the 28th Light Cavalry, all

The non-silladar system.

of which had in the past formed part of the Madras Army. They were the oldest surviving Indian Cavalry regiments, and there is no exact record of the date when the 27th Light Cavalry, the senior of the three, was raised. It is, however, known that this regiment was in the service of the Nawab of Arcot prior to 1780, and was received into the service of the East India Company in 1784. It may be worth recording here that a curious anomaly existed in the numbering of the Madras Cavalry regiments. In early days it had been customary for the regiments to take their relative seniority from the seniority of their respective Commanding Officers. This system necessitated frequent changes in numbering and when, in view of the obvious inconvenience involved, the system was finally abandoned, it happened that the title "First" was held by the regiment which in point of fact was raised at a later date than the other two. This was overlooked at the time of the renumbering under Lord Kitchener's reorganization, and the junior regiment became the 26th. The claims of the other two regiments were, however, restored in the post-war scheme of reorganization, as will be seen later in this chapter.

The other thirty-six Indian Cavalry regiments were organized on the silladar system. In origin this was a yeomanry system, under which the individual soldier supplied and maintained his horse, clothing, equipment,

The silladar system.

arms (other than his rifle), and lines, receiving in return a higher rate of pay than the non-silladar soldier, whose needs were furnished by Government. The more wealthy and influential silladars were also allowed to enlist fellow countrymen, who were too poor to provide their own horses and equipment. The men so enlisted were known as Bargirs and were equipped and maintained at the expense of their more fortunate patrons, who in turn drew a recognized proportion of the pay of their Bargirs.

In course of time it was found that the increasing standard of efficiency demanded of the Indian Cavalry necessitated a horse and equipment of better quality than that usually obtainable by the silladar. It thus came about that the original system was modified, and, while the silladar remained the owner of his horse and equipment, the recruit, instead of bringing and replacing, when necessary, his horse and equipment, was required to pay to the regiment on enlistment a sum of money, known as his assami, wherewith the horse and equipment were purchased under regimental arrangements. A monthly sum was also taken from the pay of each man to provide for the replacement of horse and equipment which became unserviceable. In this way the man was subjected to the deduction of a constant sum, and spared the pecuniary embarrassment which occurred, for instance, in the event of the untimely death of his horse. The new system proved popular, not only for this reason, but also because at the end of his service the silladar was repaid the value of his assami in cash, and his horse and equipment were taken over by the regiment for issue to the recruit entertained in the place of the man discharged.

With the introduction of the assami system, however, it was found that the majority of recruits were unable to produce in cash the full amount of their assami. To avoid the necessity of borrowing at ruinous rates from money-lenders, it became the custom to insist on the production of part only of the assami in cash, the balance being advanced from regimental loan funds (which were assisted by Government loans), at a low rate of interest, and recovered by monthly deductions from pay. This procedure removed one of the causes which had led to the introduction of the Bargir, who soon disappeared except in a few regiments in which the Indian Officers were still allowed, even in 1914, to maintain their Bargirs.

The silladar system was markedly cheaper to Government in peace than the non-silladar. It was, however, only applicable in its entirety to peace conditions. The additional casualties among

horses and wear and tear of equipment, which are the inevitable concomitants of war, must obviously be made good at the expense of the country. This was adjusted by paying to Government the monthly cuttings normally paid in peace to the regiment. In return Government accepted the entire responsibility for maintenance during war and of returning the regiment with its full complement of serviceable horses and equipment on the termination of the campaign.

Prior to 1914 signs were not lacking that, on account of the rise in prices of horses and equipment, silladar regiments had begun to experience difficulty in equipping themselves adequately without making further demands on the soldier in the shape of increased cuttings from his pay. It is true that the situation was not universal as, thanks to better business methods and other circumstances, some regiments were markedly better off than others. It was, however, generally felt that the balance of pay left to the man (out of which, it must be remembered, he had in those days to feed himself as well as provide for his family) had reached so low a limit that any further increase in the contributions demanded from him would render service unattractive. Some assistance had been received from Government in the way of grants of land for horse farms, whereby the drain on regimental funds was relieved in some degree, but it was becoming clear that an increase of pay would soon be necessary if the standard of efficiency was to be maintained, and the superior type of recruit, who had been a feature of the silladar system in the past, was still to be attracted to serve.

With the outbreak of the Great War the maintenance of silladar regiments was transferred to the State. In the past the silladar system had stood the strain of war well enough, but never before had Indian Cavalry been employed on field service in such large

numbers, for so protracted a period, or so far from their recruiting grounds. By October 1915, the greatest difficulty was being experienced in maintaining silladar regiments, although the bulk of the Indian Cavalry in France had not then been seriously engaged. Enquiries were instituted into the causes of the difficulties and possible means of alleviation. The opinion of a large number of commanders of regiments and higher formations were collected, from which it was found that the main difficulties could be grouped under two heads, those of the general maintenance of the regiments in the field and those experienced in the administration of their depôts in India.

Under the first heading there were two major difficulties; the supply of reinforcements of the required classes, and the maintenance of equipment.

In the matter of reinforcements, the lack of an adequate reserve in peace, soon rendered it impossible for the depôts to keep pace with the demands of their respective regiments. It thus became necessary to supply reinforcements from the regiments remaining in India which were not engaged in active operations. There was no system of linked regiments in existence, nor could one be improvised satisfactorily owing to the great diversity of the class composition of Indian Cavalry regiments. It thus came about that drafts sent to the theatres of war had to be pooled before distribution to units in the field, which, in consequence received their reinforcements from a variety of sources. This in itself would not have been a serious obstacle, had it not involved complications in the depôts of the regiments in the field, and in many cases enforced service among strangers to which the Indian soldier holds a rooted objection.

The difficulty experienced in the replacement of equipment was due to the fact that in peace silladar regiments were allowed to adopt their own patterns of saddlery, clothing and equipment. It was obviously impossible for Ordnance Depôts to hold stocks of every individual pattern; and it was often necessary to cast complete articles when some small part only was in need of replacement. This was wasteful in the extreme, and the alarming demands for replacements which arose gave a distorted impression of the quality of the equipment maintained in peace. As the original articles wore out and were replaced, the difficulty due to the diversity of patterns disappeared, nor was it at any time an insuperable obstacle to the continuance of the silladar system, any more than the reinforcement difficulty already referred to. Both however, indicated directions in which reforms were imperative on the termination of the war.

The difficulties experienced in depôts, and by the regiments which remained in India, were of a character much more destructive to the future continuance of the silladar system. They were mainly of a financial nature and their intricacy is hard to describe except at great length. Put as briefly as possible, the chief troubles were:—

- (a) While the unit in the field was administered on a non-silladar basis, the depôt remained entirely under the silladar system. The transfer of each man from the

depôt to the regiment, or *vice versâ*, consequently involved extreme complication and delay in the adjustment of his accounts.

- (b) The heavy demands for recruits made it impossible to insist as in peace time on the production of part of the assami in cash. Moreover, if the whole assami had been lent from regimental funds, the recruit usually was drafted to the front long before he could refund the loan. Once he had gone to the front, the process of recovery became complicated as there was no means of knowing to what unit he would eventually be drafted. In consequence no assamis were demanded, and then the further complication arose that the recruit was receiving the more advantageous rates of pay of a silladar without having incurred the capital liability which entitled him to be treated as such.

- (c) Whenever a silladar was killed or invalided out of the service, his estate or the man himself was entitled to receive the value of his assami without delay. In war the amount due could not immediately be assessed, nor were regiments able, after a short time, to liquidate the claims against them on this score, as they were not receiving assamis from recruits. These claims should have been taken over by Government perhaps, but this was not done.

These three instances will suffice to show that there existed difficulties in the working of the silladar system in a war of the first magnitude which were entirely unprovided for. A variety

of expedients were suggested, but these were mainly of a character calculated to alleviate the immediate difficulties rather than to

obviate their recurrence in similar circumstances. After careful consideration, in which full value was attached to the fine traditions and inherent economy of the silladar system in peace, it was agreed that, in view of the very drastic modifications required to meet war conditions, and the increasing volume of accounting work thrown on the shoulders of a commanding officer in peace, to the detriment of his more legitimate duties, the most satisfactory solution was to abolish the silladar system. This view was upheld by the Army in India Committee by whom the question was examined in February 1920. Two months later the approval of the

Secretary of State for India was accorded to the abolition of the silladar system.

Before the process of conversion of the thirty-six silladar regiments to a non-silladar basis was commenced, it had been decided, as a measure partly of economy and partly of readjustment, that 21 Indian Cavalry regiments only should be retained permanently in the post-war army, to which had to be added temporarily such regiments as were required by His Majesty's Government for service in mandated territories. These additional regiments were to be retained only as long as they were needed for this specific purpose, and were to be maintained at the expense of Imperial revenues.

In order to give effect to this wholesale reduction, involving the eventual loss of eighteen regiments and 56 per cent. of the pre-war establishment of personnel, it was decided to adopt a scheme of amalgamation rather than of total disbandment of regiments. Accordingly three regiments were selected for retention as separate entities and the remaining thirty-six were arranged in pairs, each pair being required to produce one reorganized non-silladar regiment. The three regiments selected for preferential treatment were the two oldest in the service, namely the 27th and 28th Light Cavalry, and the Guides Cavalry, which was now separated from the Corps of Guides of which it had hitherto formed an integral part.

Simultaneously with the conversion and amalgamation described above, a most important further measure of organization was introduced, which was designed to overcome the main difficulties experienced in the provision of reinforcements during the Great War. The twenty-one regiments were arranged in seven groups of three regiments each, and the class composition of all regiments was so readjusted that the three regiments in each group became identical in their class composition. In addition seven stations were selected, which formed suitable permanent locations for regiments allotted to internal security duties, and one of these stations was allotted to each group, with the result that one of the three regiments of each group will always be located in a permanent regimental centre. A group dépôt will be formed in this station on mobilization and will be made responsible for the training and provision of reinforcements for the whole group. The group dépôt will be formed from the personnel surplus to the war establishments

Measures of reorganization: the group system.

of the regiments of the group, and the reservists of the entire group. In this way a pool of trained reinforcements of the correct classes, as well as a staff for recruit training, will immediately be available in each group.

Yet another measure of reorganization, making for greater efficiency in war, was introduced at the same time. This was the substitution of an establishment, in peace and war, consisting of three squadrons, with a headquarters wing, in which are collected the specialists such as machine gunners, signallers, armourers, etc.

The post-war organization of cavalry regiments. This takes the place of the former establishment, of four squadrons of identical composition, each of which had to furnish a proportion of specialists when required. This organization, which corresponds to that adopted in British Cavalry, presents obvious advantages in assimilating peace and war procedure.

The comprehensive reorganization outlined above was commenced in March 1921. In spite of the sweeping character of the reform, it was carried through in a manner which reflected credit on the regiments involved. It could not be finally completed until the last Indian Cavalry regiment serving overseas returned to India without relief by another regiment. This proved to be the 31st Duke of Connaught's Own Bombay Lancers, in November 1923.

So far no mention has been made of the additional Indian Cavalry regiments raised during the War, as their disbandment was in train or had actually been effected before the reorganization scheme took its final form. It is, however, worth recording that three regiments, known as the 40th, 41st and 42nd Cavalry, were raised in India between April and July 1918. Three more,

Other cavalry regiments. known as the 43rd, 44th and 45th Cavalry, were raised in Egypt in August 1918, from personnel rendered surplus to the immediate requirements of their regiments in consequence of the transfer of the Indian Cavalry Divisions from France to Palestine. The last named three regiments were despatched to India, where they were completed to their full establishment, but the necessity for their retention soon passed and they were disbanded in January 1919. The career of the 40th, 41st and 42nd Cavalry was longer, and they saw service in Baluchistan and East Persia before the international situation permitted their disbandment in 1921.

To turn to the minor units mentioned in the first paragraph of this chapter, the Aden Troop is still on a silladar basis: the

desirability of its conversion to a non-silladar basis has, however, been accepted and the change will shortly be carried out. Of the Bodyguards, that of His Excellency the Governor-General alone is chargeable to central revenues. All are organized on a non-silladar basis except the Bodyguard of His Excellency the Governor of Bombay.

**The Establishment of
an Indian Cavalry
Regiment.**

The peace establishment of an Indian Cavalry Regiment comprises:—

14 British officers.

18 Indian officers.

504 Indian non-commissioned officers and men.

In each unit there is a Regimental Headquarters, with a Headquarters Wing and three Squadrons.

The Regimental Headquarters consists of the Commandant (Lieutenant-Colonel) with his Adjutant, Quartermaster, Risaldar Major, Woordie Major, Jemadar Quartermaster, Jemadar Clerk and a small administrative staff.

The Headquarters Wing is commanded by the Second-in-Command (Major) assisted by a Squadron officer (Captain or Lieutenant) and 2 Indian officers. It consists of a machine gun group and three other groups in which are collected the regimental signallers, armourers and other artificers and specialists.

Each squadron is commanded by a Major assisted by two squadron officers (Captains or Lieutenants) and 4 Indian officers. The squadron consists of a small squadron headquarters (3 British Officers and 9 Indian ranks) and four troops, each of which is in charge of an Indian officer. Three of the troops in each squadron are organized as sabre troops while the fourth is a Hotchkiss gun troop.

Chapter X—Indian Infantry and Pioneers

IMMEDIATELY prior to the outbreak of war in 1914, the Indian Infantry and Pioneers comprised 118 regiments. All these consisted of single battalions except the 39th Garhwal Rifles, and 10 Gurkha regiments, which each comprised 2 battalions. In 1914, therefore, the number of Indian Infantry battalions was as follows:—

	Battalions.
95 Infantry regiments of 1 battalion .	95
11 Infantry regiments of 2 battalions .	22
12 Pioneer regiments of 1 battalion .	12
118	129

The single battalion regiments were linked together in groups of 2 to 5 units, and each group was allotted a regimental centre. All recruits who enlisted in one regiment or battalion thereby rendered themselves liable to serve in any other unit of the group of that regiment or battalion, and it was the intention that one unit of the group should always be located at the regimental centre. The object of linking units together in this way was that, in case of emergency, the unit at the regimental centre could be employed to reinforce the other units of the group. This organization was introduced in 1886 (*vide* Chapter I). It had the obvious disadvantage that, in practice, the units of the group could only be reinforced by depleting the strength of the unit which happened to be located at the regimental centre. As there were 43 of these centres it followed that, in cases of grave emergency, the system would have to be abandoned or 43 battalions, all fully trained, that is to say, one-third of the strength of the Indian Infantry, would not be available for active service.

In reality, linked battalions were independent of each other, and, whenever one of them proceeded on service or overseas, it left behind a dépôt which was composed of 1 or 2 British officers, some

administrative and clerical staff, recruits and sick men and others surplus to war establishment. Each dépôt was a self-contained unit and as a rule had to be extemporized when the occasion arose. As each dépôt enrolled and trained its own recruits and maintained the records of the mobilised battalion, the officer commanding the dépôt had to keep in constant touch with the officer commanding the parent unit.

During the great war the linked battalion system was of necessity not employed and the depot system broke down. On the 1st December 1918, immediately after the armistice, there were 280 Indian Infantry battalions in the Indian Army. Of these 115 battalions were serving overseas on field or Imperial service. There were consequently 115 Indian dépôts in India, each in correspondence with a battalion commander overseas, each indenting separately on the Ordnance and Clothing Departments, each striving to train its own recruits and each competing with every other in the recruiting market. The dépôts had swollen to an average strength of at least 1,400 men, largely consisting of instructors, recruits or unfit men returned from overseas. The enormous numbers that kept passing through the dépôts rendered the satisfactory maintenance of records and accounts a problem of supreme difficulty, and in the ultimate result a state of confusion arose from which the dépôt commanders found it well nigh impossible to extricate themselves. The fundamental faults of the system were the isolation of the dépôts and the extemporised character of their formation.

To obviate these defects the training battalion system was introduced in 1921 and made applicable to all Infantry and Pioneer regiments, except the Gurkhas and the 106th Pioneers. By this system the battalions are linked together in groups of an average of 4, with 1 training battalion included in each group. The training battalion is designed to act as a permanent dépôt for all its "active" battalions both in peace and in war, and contains 1 training company for each of the active battalions to which it is affiliated. Each active battalion is responsible, at all times, for providing the commander and the administrative and instructional staff of the training company, while the training battalion, on its part, is responsible for providing the clerical staff, and for enrolling and training the recruits on behalf of the active battalion. By this means the officer commanding an active battalion is freed from the duties of obtaining and training recruits, and can

devote more of his attention, instead, to the higher training of the men of his own (the active) battalion.

The training company also provides, in peace, the nucleus of what would, under the former conditions, have been the depôt of the active battalion. This nucleus is fully organized in peace to undertake in war the extra duties of maintaining the records, accounts, etc., of the active battalion, assisted by certain clerical, administrative and instructional personnel not required by the active battalion when it is mobilized. Indeed, in peace, the training battalion actually carries out on behalf of its active battalions most of the duties for which the former depôts were responsible in war, and the necessity for extemporisation, which was the principal source of weakness in the depôt system, is a thing of the past.

As in the former linked battalion system, all the recruits enrolled in a training battalion engage to serve in any active battalion affiliated to that training battalion. This liability is now real, and not superficial. By this means the basis of reinforcement for all active battalions is broadened, and in case of need each active battalion will look not to its own training company only, but to the training battalion as a whole, for the necessary reinforcements.

One great advantage of the system is the permanency of location of the training battalion, which thus provides a permanent home as well as a nursery for all the active battalions with which it is associated. The constant interchange of personnel between different active battalions and their training companies, and their association together in the training battalion for specified periods, create the most intimate relations between the active battalions and the training battalion, and with each other.

All the units of a group being thus made mutually dependent on each other for their efficiency and happiness, it was decided in 1922 to convert the groups into regiments, thus introducing the regimental system into the Indian Infantry and Pioneers. This entailed renumbering. The regiments are now numbered in succession throughout the army—pioneers separately. The designations of Gurkha regiments, which were already in existence, remain unchanged. The former single battalion Infantry regiments have been converted into battalions and are numbered successively within their regiments. It is unnecessary to describe the details of the scheme. These can be ascertained by a perusal of Appendix V.

Introduction of the Regimental system.

THE EVOLUTION OF THE ARMY IN INDIA

With the introduction of the regimental system, the establishment of the Indian Infantry is now (1923) constituted as follows:—

	Battalions.
20 Infantry regiments consisting of	107
3 Pioneer regiments consisting of	12
1 Independent Pioneer battalion (4th Hazara Pioneers)	1
10 Gurkha regiments consisting of	20
34	140

In 1914 there were five different authorized establishments for Indian Infantry battalions, varying in strength of Indian ranks between 600 and 912. The majority of battalions had, however, the following establishment:—

British officers	14	
Indian officers	16	}
Indian other ranks	896	

This establishment was made up of the battalion staff consisting of the commandant, adjutant and quartermaster, and four companies. A maxim gun section was included in the establishment of battalions of the field army only.

In the reorganization of 1921, new peace establishments were drawn up, and the varying establishments of pre-war days were crystallised into the following:—

		British officers.	Indian officers.	Indian other ranks.	Total Indian ranks.
Infantry	Active	12	20	806	826
	Gurkhas	13	20	921	941
	Training (average establishment).	9	14	636	650
Pioneers	Active	12	16	784	800
	Independent	13	20	921	941
	Training (average establishment).	9	11	469	480

As a result of experience gained in the war, and in conformity with the method employed in the British Army, the above establishment was divided into battalion headquarters, headquarters company and four companies in the Infantry, and three companies in the Pioneers (four in the independent Pioneer battalion). Training battalions were made up of battalion headquarters and as many companies as there were active battalions in the group.

Consequent on recommendations made by the Retrenchment Committee of 1922-23, the strength of active Infantry and Pioneer battalions was reduced by 64 sepoys each, with the result that fresh establishments were authorised on the 14th August 1923.

Amended Establishments of 1923.

They now stand as follows:—

		British officers.	Indian officers.	Indian other ranks.	Total Indian ranks.
Infantry	{ Active . . .	12	20	742	762
	{ Gurkhas . . .	13	20	921	941
	{ Training (average) .	9	14	636	650
Pioneers	{ Active . . .	12	16	720	736
	{ Independent . . .	13	18	923	941
	{ Training (average) .	9	11	469	480

In the final organization a “Headquarter Wing” has been substituted for the “Headquarters Company.”

Excluding training battalions for the moment, the organization of an Infantry or Pioneer battalion is built up on the basis of a section, the smallest unit of men, which is commanded by a naick or lance naick, the junior non-commissioned officers in the battalion. A section consists of from 8 to 11 men.

Present organization of a battalion (other than training battalions) in detail.
The section.

A platoon comprises 4 sections. In the Infantry 3 of these are rifle sections and 1 a Lewis gun section. In the Pioneers all four are rifle sections. The platoon is commanded by an Indian officer (Jemadar or Subadar) assisted by a second-in-command, a Havildar. These with

The Platoon.

the bugler, who acts as orderly to the platoon commander, constitute "Platoon Headquarters." The platoon therefore consists of a headquarters and 4 sections.

The company comprises 4 platoons. It is commanded by a British officer, designated the company commander, assisted by a British officer, as a company officer, and

The Company. various Indian ranks and followers, who though not included in platoons, are required for the proper administration of the company as a whole. These British officers and Indian ranks and followers comprise what is known as "Company Headquarters." Thus a company consists of a headquarters and 4 platoons.

The headquarter wing comprises all the fighting personnel not distributed through companies or included in battalion headquarters (see below) and includes also cer-

Headquarter Wing. tain combatant and other personnel who act on behalf of the battalion as a whole.

It is divided into 4 groups—

- | | |
|-----------------------|--|
| No. 1 group | Signallers and the band. |
| No. 2 group | Machine gun personnel in Infantry and Lewis gun personnel in Pioneers. |
| No. 3 group | Provost, mess and sanitary and artificers personnel. |
| No. 4 group | Transport personnel, tradesmen, etc., and followers. |

The headquarter wing is commanded by the second-in-command of the battalion, assisted by a certain staff to administer the personnel of the wing. The headquarter wing therefore consists of a headquarters and 4 groups.

Battalion Headquarters. Battalion headquarters is the staff of the battalion and includes—

Commanding officer.
 Adjutant.
 Quartermaster.
 Subadar Major.
 Jemadar Adjutant.
 Jemadar Quartermaster.
 Orderlies of the above.
 Battalion Havildar Major.

Battalion Quartermaster Havildar.

Battalion clerical establishment.

Thus a battalion consists of—

Battalion headquarters.

Headquarter wing and

3 or 4 companies (each consisting of 1 headquarters and 4 platoons, or 16 sections).

A training battalion is organized on the same principles. But as the bulk of the personnel are recruits under training the section

Organization of a Training Battalion in detail. organization can be dispensed with, and, as there are no signallers or machine gunners in the training battalion, there is less necessity for the formation of a headquarter wing.

The object of the training battalion is the training of recruits, and the platoon is therefore composed of instructors, recruits, and trained sepoys who carry out regimental duties. The platoon is commanded by the senior havildar instructor. Financial reasons preclude the presence of an Indian officer to command each platoon.

Platoon.

Training Company. The training company consists of 4 platoons and, as in the case of active battalions, it includes a headquarters.

Battalion headquarters corresponds to that of an active battalion, but also includes the personnel of Nos. 3 and 4 groups of the headquarter wing of an active battalion.

Battalion Headquarters.

Thus a training battalion consists of—

Battalion headquarters and as many training companies as there are active battalions in the regiment, each consisting of a headquarters and 4 platoons.

The war establishment of a battalion shows the strength at which the battalion mobilizes and proceeds on field service. The peace establishment of a battalion is based on its war establishment and is drawn up, for the sake of simplicity, as nearly as possible in conformity with it.

Peace and War Establishments.

The ruling factors in deciding the peace establishment of a unit are the following:—

- (a) The number of men who, it is necessary to assume, will be medically unfit to proceed on service with the unit, at the time when it is mobilized.

- (b) The number of men who will be required to remain behind with the training company or depôt to administer the affairs of, and train reinforcements for, the mobilized unit.
- (c) Wastage in the field and the means available to maintain the unit at full war establishment; and
- (d) The limit of cost which has to be observed.

To provide a peace establishment which would meet all the requirements indicated by the first three factors would mean extravagance, and it is, therefore, necessary to devise some method whereby, on mobilization, the peace establishment may be supplemented by additional personnel. This object is attained by the formation of what is called a reserve.

In 1914, the normal peace establishment of units exceeded the war establishment by a considerable margin, and it was possible to mobilize a unit from its peace establishment without drawing upon the reserve. The ruling factors (a) and (b) were thus covered, and it was only necessary to draw upon the reserve to maintain the unit in the field for 8 months, *i.e.*, the period required to complete the training of recruits enrolled at the outbreak of war.

In 1914 the terms and conditions of service of the Infantry reservists were briefly as follows:—

- (a) There was only 1 class in the reserve.
- (b) Service in the reserve was voluntary, and any man of good character, with not less than 3 years' colour service and not over 32 years of age, was eligible for transfer to the reserve.
- (c) Training of reservists was carried out biennially for two months, and during that time reservists were paid on the scale of a soldier serving with the colours.
- (d) The pay of a reservist, when not called up for training, was Rs. 2 per mensem.
- (e) Reservists were entitled to a retiring pension after 25 years' combined army and reserve service, or to gratuities on discharge for inefficiency or on being invalided, varying between 3 and 12 months' pay and good conduct pay according to service.

The authorized establishment of the reserve was 31,923.

Owing to the reduction effected as a result of the recommendations of the Retrenchment Committee, 1922-23, the peace establishments of Indian Infantry and Pioneer battalions (excluding Gurkha battalions and the Independent Pioneer battalion, which were excepted) are now, in the case of the Infantry 5 less and, in the case of the pioneers, only 11 more than their corresponding war establishment. Reserves for these units have therefore to be sufficient to provide for an actual shortage on mobilization as well as for the maintenance of the mobilized unit at full strength for the first 3 months after mobilization. It is essential, therefore, that the reserve now formed must always be up to establishment—thus necessitating that reserve service should be compulsory—and must also be highly efficient. This has resulted on the one hand, in stricter conditions of service, and on the other, in improved conditions of pay, pension and gratuities.

The conditions of the new reserve, which were introduced in August 1923, are as follows:—

- (a) There are two classes in the reserve, Class A and Class B.
A reservist is eligible to serve in Class A up to 8 years combined army and reserve service, and in Class B up to 15 years combined service.
- (b) Service in the reserve is compulsory. On enrolment a man engages to serve at least 5 years in army service, and to serve up to 15 years in combined army and reserve service, if required to do so.
- (c) Reservists will be trained for not more than 1 month, annually in the case of Class A, and biennially in the case of Class B. During training the reservist will receive the full pay of a serving soldier.
- (d) While not under training the reservist will receive pay as follows:—

Class A, Rs. 7 per mensem.

Class B, Rs. 4 per mensem.

- (e) A reservist will be discharged from the service after 15 years combined army and reserve service, when he will receive a pension of Rs. 3 per mensem, or, if he desires it, a gratuity of Rs. 300 in lieu. A reservist who is invalided from the reserve is granted a gratuity varying between 3 and 6 months' pay and good conduct pay according to service.

THE EVOLUTION OF THE ARMY IN INDIA

The establishment of the infantry reservists (including Gurkha battalions and the Independent Pioneer Battalion, 1/4th Hazara Pioneers) is fixed at present as follows:—

Infantry	26,448
Gurkhas	2,000
Pioneers	1,395
Independent Pioneers	81
	29,924

Thus, although the establishment of the new reserve is some 2,000 less than that of 1914, it is hoped that, by ensuring its maintenance at approximately full strength, and by the better conditions of service, it will prove to be a more efficient weapon than the old reserve in fulfilling the purpose for which it is designed.

The class composition of battalions included within regiments is as far as can be arranged homogeneous. Class composition of units is given in the Indian Army List.

Chapter XI—The Signal Service

THE Signal Service of an army is constituted for the purpose of giving commanders in the field the means of communicating with each other. It consists of signal units allotted to military formations: and the equipment of each unit depends on the type of formation it has to serve.

Definition of the Signal Service, and its functions.

In a modern army many different means of communication are employed, and the use of one or the other is determined, amongst other things, by the degree of proximity to the enemy. "Signals" in the technical military sense include the human messenger, carrier pigeons and dogs, the telephone, the "fullerphone" or buzzing instruments with a light cable, wireless telegraphy, telegraphs worked by hand, that is to say, the transmission of messages in the Morse code by means of flags or by the heliograph, which is a mirror reflecting the sun's rays, and, lastly, high speed automatic telegraphy. It will be readily understood that in modern times the invention of aeroplanes has helped to stimulate the development of signalling science on the military side, since, in order to secure effective co-operation between the Royal Air Force and the army, it is essential that there should be some reliable means of transmitting messages between aeroplanes in the air and the troops on the ground. It will also be readily understood that the Signal Service is one which, from its peculiar character, cannot be improvised in war, but must be maintained in a high state of efficiency in peace time.

The experience of the Great War demonstrated nothing more conspicuously than the paramount importance of rapid and reliable means of inter-communication, and this has been recognized in the British Army by the formation of the Royal Corps of Signals, on which the Indian Signal Corps is now modelled.

In 1914 the present Indian Signal Corps did not exist as such. It was represented in those days by 4 divisional signal companies, and 1 wireless section. These were affiliated to the sapper and miner organization, but formed a separate part of it; that is to say, they were treated as Sapper and Miner units, but they

The Indian organization in 1914.

were independent of the Sapper and Miner Corps as regards their administration. The British officers of the signal units were provided partly from the Royal Engineers, and partly from the Indian Army. British other ranks were found from the Royal Engineers and other arms of the service. The Indian ranks were sappers, but were not interchangeable with other sappers and miners.

This organization provided 1 divisional signal company for each of 4 of the 9 divisions of the field army. In order to complete the divisional organization, an increase was obviously necessary, and, in 1913, was in contemplation: but up to the outbreak of the Great War, no additional signal unit had been formed, and no dépôt organization existed for training recruits for expansion.

On the outbreak of war, it became necessary to raise immediately one Army Corps Signal Company, one Signal Squadron, one Divisional Signal Company, and to prepare 30 per cent. reinforcements. For the latter purpose a signal service dépôt was formed at Kirkee in October 1914. As the overseas forces increased, further expansion took place, partly by the formation of additional units in India, and partly by improvisation in the overseas theatres.

Great difficulty was experienced in obtaining suitable personnel and, to meet the increased demands, a further reorganization of the signal service dépôt took place in November 1916. Eventually the dépôt was moved to Wellington and, in addition, a drivers' dépôt was formed at Kirkee. This was the position at the close of the war.

Differences in establishments between British and Indian units, constant changes necessitated by experience gained, including the adoption, in many cases, of new establishments all tended to increase the difficulties involved in meeting the war requirements of the various forces. Fortunately, the potential reserve existing in the form of the government telegraph departments of Great Britain, the Dominions and India, and the invaluable assistance rendered by those departments, made it possible for the signal service to carry out its task with a great measure of success.

For the reasons which have been indicated, improvement and reform of the signal service was one of the essential requirements of the post-war scheme of army reorganization: and accordingly the Indian Signal Corps was created, with an establishment

The Post-war Indian organization.
The Indian Signal Corps.

of some 2,000 British and 3,500 Indian ranks, as compared with a few British non-commissioned officers and some 350 Indian ranks, which constituted the signal service of the Army in India before the war. The Corps is organised on the same lines as a Sapper and Miner Corps, with a headquarters and dépôt for recruiting and training personnel, and detached field units for the various army formations. The head of the corps is the Signal Officer-in-Chief, who is attached to the General Staff Branch at Army Headquarters as a technical adviser on questions connected with signals, and is also responsible for the technical inspection of all signal units. A chief signal officer with similar functions is attached to the headquarters of each Army Command.

The headquarters and dépôt, termed the Signal Training Centre and Dépôt, are located at Jubbulpore, and are commanded by a Lieutenant-Colonel, assisted by a staff, British and Indian, organized on very much the same lines as the headquarters of a Corps of Sappers and Miners.

The various types of field units, and the number maintained, are:—

Cavalry Brigade Signal Troops	4
Divisional Signals	7
Corps Signals	2
Signal Parks	2

In addition, there are an Army Signal School and a Wireless Training Section, which carry out the training of regimental signalling instructors, and of personnel for wireless units, respectively.

The larger units, such as Divisional Signals and Corps Signals, consist of several sub-units, *i.e.*, companies or sections, according to the particular duties for which the various portions of the unit are required. The larger units are usually commanded by a major, assisted by Viceroy's commissioned officers, and the companies and sections are commanded by captains and subalterns, respectively.

The Indian Signal Corps has only recently been created in its present form and is still in its infancy. There are many difficulties to be overcome before the degree of efficiency which is necessary can be achieved. Certain details of organization and establishments have yet to be settled: progress is necessarily retarded because many of the personnel lack experience: and even without

these handicaps it would not be an easy matter to keep pace with the rapid developments in technical appliances and in wireless equipment especially. Moreover, there is still a danger that new invention will quickly render obsolete even a recent pattern of signal equipment: and for this reason a cautious and deliberate rate of progress is, in the case of the signal service, definitely advisable. At the same time, the newly created organization has already been tested by service in Waziristan, and has shown that it contains the germ of success.

Chapter XII—Royal Tank Corps

THE Machine Gun Corps, as a separately constituted formation, was a war organization which has since ceased to exist; and Machine Gun companies and squadrons have once more been merged in cavalry and infantry units as part of their establishments. In addition to squadrons and companies the

**Machine Gun Corps
of the Great War.**

Machine Gun Corps comprised certain mobile machine gun units equipped with mechanical transport, such as Motor Machine Gun and Armoured Motor batteries. During the war there were in all 16 Armoured Motor batteries and 5 Motor machine gun batteries on the Indian establishment. These units possessed a high degree of mobility and great fire power, while the Armoured Motor batteries were also practically immune to any form of attack other than artillery fire. Units of this nature are invaluable under Indian conditions for the interception of raiders, the protection of convoys and frontier duties generally, and for use in aid of the civil power, in the case of outbreaks such as that in Malabar, where large extents of road or railway have to be patrolled and protected. For work of this character armoured cars are more efficient and much more economical than cavalry.

The Machine Gun Corps was abolished in 1921. But prior to its abolition certain units of the Tank Corps had arrived in India to take the place of the Armoured Motor batteries and Motor Machine Gun batteries above mentioned. These Tank Corps units consisted of 6 Armoured Car companies. These have been permanently retained in the post-war Army and, as will shortly be seen, their number is to be increased.

The Tank Corps comprises two distinct categories of fighting machine. Firstly there is the fighting tank itself. This is a heavy armoured vehicle mounted on flexible tracks and equipped with semi-automatic quick firing guns and Vickers machine guns, which is primarily intended for work in co-operation with cavalry

**The Tank Corps, Tank
and Armoured Car
Companies.**

or infantry against strongly entrenched and wired enemy positions. The tank is independent of roads and can move across all ordinary country. So far tanks have not been actually adopted as part of the Army in India's equipment. Experiments have been made to find a tank which will be reliable under Indian conditions of temperature and terrain. But it is held that the conditions of warfare on the frontier do not at present render the provision of fighting tanks a first essential, though, when reliable tanks can be produced, they will undoubtedly be of great potential value.

Secondly, there is the armoured motor car. Though the movements of the armoured car are restricted to roads, or to comparatively level and open country, yet as we have already indicated this type of vehicle is invaluable under Indian conditions: and its introduction is a real economy, in that its use renders it possible to reduce more expensive cavalry establishments.

As previously stated 6 Armoured Car companies arrived in India in 1921. Two more companies are due to arrive in 1924-25,

The Indian Establishment of Armoured Car Companies.

as partial compensation for the British cavalry regiments which are to be reduced in conformity with a recommendation of the Indian Retrenchment Committee. Eight Armoured Car companies is the total establishment at present in view. To complete the organization a Tank Corps Centre is maintained at Ahmednagar for the training of Tank Corps personnel, and for the administration of the Corps.

As in other cases, the establishment of an Armoured Car company is built up from its smallest unit. It is tactically unsound to use a single armoured car acting independently; cars should invariably work in pairs to give mutual support. Hence the smallest tactical unit is the sub-section of two cars. Two sub-sections constitute a section. The section is commanded by a captain or a subaltern, and is self-contained and capable of independent action. Three sections constitute a company. The company is commanded by a major. In addition to the 12 active cars in the 3 sections, 4 cars are held in company reserve to replace active cars temporarily out of action. Each car is armed with a Vickers machine gun.

ROYAL TANK CORPS

The establishment of a Tank Corps Company and of the Tank Corps Centre are shown below :—

—	British Officers.	British other ranks.	Follow- ers.	Motor Cars.	Motor Cycles.	Armoured Cars.	Lorries.
Tank Corps Centre.	9	45	15	1	4	9	12
Armoured Car Company.	12	144	37	2	6*	16	10

* Two companies have eight cycles.

Chapter XIII—Medical Services

THE military medical services in India are composed of the following categories of personnel and subordinate organizations:—

- Composition and functions.**
- (i) Officers and other ranks of the Royal Army Medical Corps serving in India.
 - (ii) Officers of the Indian Medical Service in military employment.
 - (iii) The Indian Medical Department, consisting of two branches, *viz.*, (a) Assistant surgeons and (b) Sub-assistant surgeons.
 - (iv) The Queen Alexandra's Military Nursing Service for India.
 - (v) The Indian Troops Nursing Service.
 - (vi) The Indian Hospital Corps.

Of these categories, the officers and men of the Royal Army Medical Corps, the assistant surgeons of the Indian Medical Department, and the Queen Alexandra's Military Nursing Service for India are primarily concerned with the medical care of British troops: while the officers of the Indian Medical Service, the sub-assistant surgeons of the Indian Medical Department, and the Indian Troops Nursing Service are concerned primarily with the medical care of Indian troops. The Indian Hospital Corps serves both organizations.

In the staff and administrative appointments of the medical services, officers of both the Royal Army Medical Corps and the Indian Medical Service are employed without distinction of duties; and while, in the case of executive duties, the normal peace time arrangement is to provide separately for the needs of British and Indian troops respectively, in the manner which has been indicated, in time of emergency the Royal Army Medical Corps officer attends to Indian troops, and the Indian Medical Service officer to British troops, as the occasion demands. In particular, the field medical units are of a composite character, and are organized in such a way as to provide for the medical and surgical relief of both British and Indian sick and wounded.

An essential duty of the medical services is to attend the sick and wounded of the army in hospital; but, under present day principles of military medical administration, at least equal importance is attached to the prevention of disease and to promoting hygiene in the life of the army. The object aimed at is to maintain in the soldier a high standard of physical health and fitness, and to increase his powers of resisting disease. For this reason, the medical services are required to concern themselves with every department of the soldier's life, with the climatic and hygienic conditions of the cantonments in which the troops are stationed, with the hygienic suitability of the barracks in which the soldier lives, with the clothes that he is required to wear, the equipment that he is required to carry, the quality and composition of the ration which he is given to eat, and with the character and degree also of the physical training which he is required to undergo. It is for this reason also that in modern times a larger number of specialists are employed in the military medical services for the purpose of research connected with the special conditions of army life. A medical officer in the army is expected to see more of the troops in their barracks, in their lines, and during manœuvres, than in the hospitals; and the successful medical administrator in peace time is he whose hospitals contain the smallest number of sick.

The officers and other ranks of the Royal Army Medical Corps serving in India are drawn from a powerful and highly efficient corps forming part of the British Army. They are deputed to India for a tour of duty, and are entrusted with the medical and sanitary care of the British troops serving in India. The responsibilities of the officers have already been outlined. They are employed as executive medical officers of British station hospitals, in staff appointments, and on specialist duties. The other ranks of the Royal Army Medical Corps are employed as nursing orderlies in British station hospitals. Before the war, their duties were carried out by untrained personnel drawn from combatant units, a system which, as we have seen, affects adversely the general efficiency of the army.

The Indian Medical Service is primarily a military service. But after the officers have learnt their first military duties, those that are in excess of the peace requirements of the Indian Army are lent to the civil Government for employment in civil depart-

The Royal Army Medical Corps.
Officers of the Indian Medical Service in military employment.

ments until such time as they are needed on the outbreak of war: and these constitute the war reserve. Those who remain in military employment, are, like officers of the Royal Army Medical Corps, employed on executive, staff and specialist duties, their executive duties being, however, normally performed with Indian troops.

The Indian Medical Service is a service in which Indianization of the personnel has proceeded with relatively greater rapidity than has so far been attained in almost any other Indian service of the same status. The total strength of the Indian Medical Service officers in both civil and military employment is 681. Of these, 150 are Indian officers, of whom 102 have been recruited since 1915. The Indian officer in the Indian Medical Service, like his British confrère, holds the King's commission, and is required to possess the same registrable qualifications.

The assistant surgeons of the Indian Medical Department are Europeans and Anglo-Indians who possess certain medical qualifications, which are not, however, registrable in the United Kingdom. They are principally employed to hold subordinate medical charges in British station hospitals in connection with the care of British troops. The senior assistant surgeons hold the ranks of lieutenant, captain and major.

The sub-assistant surgeons of the Indian Medical Department are all Indians. They also possess certain special qualifications which are not registrable in the United Kingdom, and they are employed to hold subordinate medical charges in the station hospitals allotted to Indian troops. Those in the senior grades hold rank as Indian officers, that is to say, as subadar-major, subadar, and jemadar.

The Queen Alexandra's Military Nursing Service for India consists of a Chief Lady Superintendent, a number of Lady Superintendents, and nursing sisters to the number required by the strength of British troops in India. The Chief Lady Superintendent is an administrative official; the others nurse sick and wounded British soldiers themselves, and they also instruct in nursing duties the male nursing orderlies and supervise their work. The Nursing Service also supervise the matrons employed in the

family hospitals, which exist for the care of the families of British officers and soldiers.

A proposal is under consideration to abolish the separate Queen Alexandra's Military Nursing Service for India, and to provide for the duties which the service now performs by employing nursing sisters of the Imperial Military Nursing Service. These, if the proposal is carried out, would come out to India for a tour of duty with British troops, in exactly the same way as officers and other ranks of the Royal Army Medical Corps.

The Indian Troops Nursing Service is an innovation introduced since the war. It has not yet been permanently established, and the numbers employed are relatively few. The duties of the service are mainly to instruct nursing orderlies of the Indian Hospital Corps, and to supervise their work in Indian station hospitals.

The Indian Hospital Corps has absorbed the Army Hospital Corps and the Army Bearer Corps of the pre-war period. Its creation was the consequence, amongst other things, of the introduction of the station hospital system for Indian troops, a measure which will be later described; and, as previously stated, the Indian Hospital Corps now serves both British and Indian sick and wounded. It is organized in five sections, namely, (a) a clerical section, which carries out clerical and office duties, connected with the administration of hospitals and medical administration generally; (b) a storekeeper's section, which is employed on the holding, issue and general care of hospital stores, such as bedding, furniture, etc.; (c) a nursing section, which provides the nursing orderlies for Indian station hospitals; (d) an ambulance section, which performs the duties previously carried out by the Army Bearer Corps; and (e) a general section, which provides certain menial and domestic servants for both British and Indian station hospitals.

The medical services are administered and controlled by the Director of Medical Services in India, an officer of the rank of Major-General on the staff of Army Headquarters, subordinate to the Adjutant-General in India. Under a principle recently introduced, the appointment of Director of Medical Services is to be held alternately by an officer of the Royal Army Medical Corps and an officer of the Indian Medical Service. The Director of

The system of administration.

Medical Services is assisted by a Deputy Director, who is also Director of Hospital Organisation, a Director of Medical Organisation for War, a Director of Hygiene and Pathology, an Assistant Director, who deals with personnel, another Assistant Director who deals with accommodation and equipment: a Deputy Assistant Director and the Chief Lady Superintendent. For administrative medical duties, each of the Army Commands has a Deputy Director of Medical Services, of whom two belong to the Royal Army Medical Corps and two to the Indian Medical Service. Administrative and supervisory duties in Districts and Brigades are entrusted to Assistant Directors and Deputy Assistant Directors of Medical Services according to the peculiar necessities of each.

Each military station in which British troops are cantoned is provided with a station hospital for British sick and wounded.

**Executive arrange-
ments in peace.
British Station Hospi-
tals.**

The system now obtaining (1923) is the same in all essential features as that which was established before the war; but in the past seven years the British station hospitals, and also the family hospitals for British troops, have been considerably improved as regards the general standard of comfort, the efficiency of nursing, and the scale and type of equipment. The British station hospital is, of course, a dieted institution and is otherwise self-contained.

A typical establishment of a large British station hospital consists of a commanding officer, who is a Lieutenant-Colonel of the Royal Army Medical Corps, four or five medical officers who are Majors or Captains of the Royal Army Medical Corps, three or four assistant surgeons of the Indian Medical Department, a lady superintendent, and a quota of nursing sisters, nursing orderlies of the Royal Army Medical Corps, and other subordinate and menial establishments drawn from the Indian Hospital Corps.

So far as the Indian soldier is concerned, the Indian station hospital is a new amenity of life in the army, introduced during the Great War of 1914-18. Before the war

**Indian Station Hospi-
tals.**

the Indian soldier was treated in his regimental hospital, which was not a dieted institution and, practically, in no sense self-contained. The equipment of a regimental hospital consisted, at the best, of beds, mattresses, and pillows, a small stock of blankets, a pair of medical panniers, and a somewhat scanty supply of medical and surgical necessities. Hospital clothing was not provided. There were no properly equipped stores or administrative

offices. Punkahs and fans were generally not provided. On admission to hospital, the patient brought his own bedding and his own clothing. He subsisted generally on his rations, supplemented by such medical comforts as were specially ordered for him. The staff of the hospital consisted of a medical officer, a sub-assistant surgeon, ward orderlies who were drawn from the combatant personnel of the regiment, and a few followers, such as bhists, cooks and sweepers. The ward orderlies were entirely untrained. It will readily be perceived, therefore, that the introduction of the Indian station hospital, based upon the analogy of the British station hospital, was a departure of supreme importance, and, while the measure has not yet been fully consolidated by the construction universally of modern hospitals, the medical attention which the sick Indian soldier now receives is incomparably superior to what he received before the war. In spite of financial difficulties, a certain number of new hospitals have already been constructed, while certain of the old hospital buildings have been adapted to suit modern requirements. The new hospitals are designed to provide adequate ward space, proper ventilation and lighting. In many of the hospitals punkahs or electric fans have been installed. Store rooms, dispensaries and administrative offices have been provided. The larger hospitals have specially built laboratories and isolation blocks, and many of the hospitals have operating rooms of good modern design. The Indian station hospital is further equipped with bedding, hospital clothing and furniture, as well as with medical and surgical instruments and appliances. They are, of course, dieted institutions, and hospital clothing is provided. It should be noted, as a further measure of progress, that the follower, who is an important personality in the army, has now been recognised as entitled to treatment in the Indian station hospital on precisely the same footing as the combatant soldier.

A typical establishment of a large Indian station hospital is as follows:—An officer commanding, who is a Lieutenant-Colonel

**Typical establishment
of an Indian Station
Hospital.**

of the Indian Medical Service, a second-in-command, who is a Major or Captain of the Indian Medical Service, other Indian Medical Service officers, the number being determined, not merely by the number of sick beds which the hospital contains, but also, for the reason given earlier in this chapter, by the number of Indian troops constituting the garrison of the station; a number of sub-assistant surgeons, nurses of the Indian Troops Nursing Service,

nursing orderlies and subordinate and menial establishment drawn from the Indian Hospital Corps.

Before leaving the subject of the introduction of the station hospital system for Indian troops, it is necessary to allude to the effect which the change had upon the Indian Medical Service. Before the war, the Indian Medical Service officer was essentially a regimental officer, in charge of the men of the regiment and of the regimental hospital. Apart from his purely professional duties, he was under the orders of the regimental commander. By reason of the defects of the regimental hospital system, which have been described above, he had little scope for the exercise of professional skill and efficiency, and his opportunities of increasing his general professional knowledge were extremely restricted. The Indian station hospital has changed all this. It has, of course, led, amongst other things, to a very considerable increase in the number of Indian Medical Service officers required for duty with Indian troops; but a moment's reflection will show that the increase in the number of officers is to be attributed, not so much to the adoption of any particular system of hospital provision, as to the fundamental alteration of the standard of medical relief provided for Indian troops; and it requires little demonstration to show that this change of standard was absolutely necessary.

The field medical units of the medical services in India, stated in the order of their proximity to the scene of actual military operations, are as follows:—

Executive arrangements in war.

Field ambulance: casualty clearing station: staging section: general hospital.

The duties of the first two classes of units are self-evident. They provide for first aid, that is to say, the emergent treatment of the wounded, who, if necessary, are thereafter evacuated from the scene of hostilities. The staging section is an intermediate unit on the lines of communication. General hospitals exist for cases requiring a prolonged period of treatment and convalescence, and are located at the base. Under the system now in force, the first two categories of field units are combined, that is to say, they are organized for the reception of both British and Indian sick and wounded. In the case of staging sections and general hospitals, considerations of economy do not stand in the way of providing

separate hospitals for British and Indian personnel, respectively, an arrangement which is obviously the more convenient.

The field units are organized in war out of peace establishments. For them, as for other component parts of an army, war establishments and a programme of war organization and mobilization are laid down in peace time. The personnel to be allotted to each of the units is earmarked, and the equipment required is held in store, ready for the outbreak of hostilities.

Before the war, the transport provided for the evacuation of the sick consisted of bullock or mule tongas. During the war, as

Transport for peace: is commonly known, the motor ambulance
and for field medical was introduced on a very considerable scale,
units. and motor ambulance convoys are now the recognised means of transport on field service, where communications are good enough to render their use possible. As has been shown elsewhere, this cannot always be guaranteed, so far as the task postulated for the army in India is concerned. Motor ambulances are also employed in connection with the hospitals in peace stations, but to a limited extent only. The present restrictions have been dictated by the need for economy, and accordingly in certain places motor ambulances are supplemented by the old fashioned bullock ambulance tonga.

Chapter XIV

The Indian Army Service Corps, and the Mechanical Transport Service

THE Indian Army Service Corps is the counterpart of the Royal Army Service Corps of the British Army. It has developed from the Commissariat Department of an earlier

Introductory.

period, and its immediate predecessor was the Supply and Transport Corps, by which name the service was known up to a short time ago. The Indian

Supply and Transport Corps.

Army Service Corps is administered by the Quartermaster-General, and is one of the principal services included in the Quartermaster-General's Department.

The Indian Army Service Corps is constituted in two main branches, namely:—

(a) Supply;

(b) Animal Transport;

and it is supplemented by the Mechanical Transport Service, which, in India, is constituted upon a special basis, but which is, generically, a sub-division of Army Service Corps organization.

Before the Great War of 1914-18, the supply branch of the

Supply. Pre-war functions and organization.

Supply and Transport Corps was responsible for the purchase and distribution of the following army supplies, namely:—

- (1) Rations for British troops, and for Indian troops in certain localities.
- (2) Grain and fodder for army animals, the property of Government (that is to say, excluding the animals of silladar cavalry regiments, etc.).
- (3) Fuel for cooking and heating purposes for British and Indian troops.
- (4) Oil for lighting purposes for British troops.
- (5) Bedding and certain articles of clothing for troops and hospitals.
- (6) Line gear for transport animals.
- (7) Miscellaneous supplies, such as cooking utensils, lamps, basins, etc., for barracks and hospitals.

At each of the principal cantonments, in which British troops were stationed, there was a supply dépôt in charge of an officer of the Supply and Transport Corps: and there were smaller dépôts at out stations where there were British detachments. Mobilization reserves of food and clothing were held separately in nine reserve dépôts at the headquarters of the divisions, excluding Burma. A store officer at Cawnpore purchased textiles, boots and other leather goods from local firms.

Speaking generally, the purchase of supplies was effected by means of local contracts sanctioned by the station commander or the General Officer Commanding the division, the latter having a technical adviser for this purpose, the Assistant Director of Supplies of the division, who was, however, primarily an administrative official. The officer in charge of supplies at each military station, who has been mentioned above, was responsible to the station commander for supervision and control of all supply duties, including the control of the supply dépôts, other than the reserve dépôts. He received all indents for supplies and carried them out within the limits of the standing regulations. He arranged for such contracts and effected such purchases, as he was directed to make. The quantities of supplies held in dépôts were definitely limited, and, in particular, there was a standing rule that, apart from the mobilization and other authorised reserves, no working stock was to be maintained of any article which could be readily obtained by direct local purchase or by contract in India.

Rations were ordinarily delivered at the regimental ration stands, by victualling agents of the Supply and Transport Corps, to the regimental orderly officer, who was responsible to his commanding officer that the supplies taken over were good. In addition to the victualling agents for the distribution of rations, the Supply and Transport Corps was also required to provide the storekeepers employed in hospitals.

The responsibilities of the supply service, during the war and since, have altered in certain very material respects. In the first place, Government having taken directly upon themselves the responsibility for feeding Indian troops and silladar cavalry having been abolished, the supply service has now to purchase and distribute rations for Indian personnel as well as for British personnel of the army, and forage for all animals of Indian cavalry. This, of course, has meant a very large addition to the

**New responsibilities.
The feeding of Indian troops.**

duties of the corps. Another addition, of a less onerous nature, is the duty of purchasing, storing and distributing petrol and lubricants for mechanical transport units. On the other hand, the corps has been relieved of the responsibility for the supply of clothing to British troops and of certain other miscellaneous articles, these duties having been transferred to the Ordnance Stores Department or to the Barrack Department of the Military Engineer services. Finally, victualling agents and hospital store-keepers were transferred from the Supply and Transport Corps to unit establishments, and the medical services, respectively. It will be clear, however, that the net result was a very substantial increase in the volume of duties allotted to the supply service, and, as a natural corollary, the organization of the service required to be expanded and elaborated.

Considerations of a separate kind led to important changes of structure. The pre-war organization of the supply service was better adapted to the maintenance of troops

Changes of structure. in cantonments, than to supply the needs of mobile formations in the field. In particular, as Indian personnel were not rationed in peace-time by the Supply and Transport Corps, units to maintain Indian troops on field service had to be improvised when war broke out: and the transition from peace to war conditions involved generally much dislocation and inconvenience. Further, the pre-war system did not provide for sufficiently close co-ordination between the supply department and the staff. It came to be recognized also that Divisional Commanders should be freed from their administrative duties, connected with the purchase of supplies and the control of stocks, and it was held in the same connection that purchases for the army could be made more economically by a central agency than by Divisional Commanders, each operating independently.

A scheme of reorganization designed to remedy these shortcomings was formally approved in 1917-18. It was subsequently developed and modified in the light of further experience, and in 1922-23, at the time Lord Inchcape's retrenchment Committee sat, the principal supply arrangements actually in force were as follows:—

The reorganization of 1917-18.

(1) The Supply and Transport Directorate at Army Headquarters continued to be administered by the Director of Supply and Transport, under the control of the Quartermaster-General. The Directorate

The organization at Army Headquarters.

was, however, reinforced by the creation of two new functionaries, namely:—

- (a) The Deputy Director of Stocks, and
- (b) The Controller of Contracts.

The duties assigned to the Deputy Director of Stocks were to control the supply depôt companies under the orders of the Director of Supply and Transport: to regulate the stocks held in them, and to place demands for fresh purchases on the Controller of Contracts, who fulfilled the function of a central purchasing agency. With the exception of certain items, which can be more economically or more conveniently purchased in detail under local arrangements, such as fresh vegetables fresh meat and firewood, the Controller of Contracts bought all articles for the supply of which the Supply and Transport Corps was responsible. His task was to buy in the cheapest market direct from the producer, and to eliminate the middleman as far as possible.

Military Food Laboratory.

(2) A military food laboratory was established at Kasauli—

- (a) to advise the Controller of Contracts whether the samples tendered to him are of suitable quality,
- (b) to test supplies by comparison with the samples, and
- (c) to assist by expert advice in regulating the turnover of stocks and reserves.

(3) An Inspector of Supply and Transport was appointed to the headquarters of each Command. His duties included the inspection of all supplies made by the Supply and Transport Corps to troops and formations in the Command.

Organization in Commands.

(4) An Assistant Director of Supply and Transport was appointed to the headquarters of each military district. Assisted by an appropriate staff, he commanded the district supply company, and made local contracts for perishable supplies not stocked by supply depôts.

District organization. The Assistant Director of Supply and Transport.

The district supply company was purely a distributing agency and did not ordinarily hold any stocks. Its main functions were to receive indents from units and check them: to arrange for the demands to be met by supply from a depôt or a local contractor: and to control the bakeries and butcheries of the area.

The District Supply Company.

The field supply units required in war were to be formed from the district supply companies: and, in the case of districts containing field army divisions, the companies contained a portion of the additional personnel required on mobilization.

The main store-holding unit was the supply dépôt company, of which there were thirteen. These contained the whole stocks and war reserves of the army. They were situated on the main railway lines, and they were filled and controlled by the Deputy Director of Stocks, under the orders of the Director of Supply and Transport.

The outstanding feature of the system described above was that it represented a fully developed war supply organization, and it was criticised on this ground by the Retrenchment Committee, who held that to maintain such a system in peace was uneconomical and to some extent unnecessary. As a result, the system has now been considerably modified. The district supply company has been eliminated, and the pre-war system of station supply has been restored in the cis-Indus area and in Karachi. The Deputy Director of Stocks has been abolished and his duties have been transferred to the Director of Supply and Transport or to Commands and Districts. In other respects, the reforms of 1917-18 and the years immediately following have been substantially maintained.

The strength of the supply establishment in 1914 and at the present day is shown by categories in the following table:—

	1914.	1923.
Officers with King's commissions	76	141
Indian officers	—	20
British other ranks	284	331
Civilians	567	679
Followers	2,931	2,895
TOTAL	3,858*	4,066*

The increase which remains after the recommendations of the Retrenchment Committee have been carried out is accounted for mainly, if not entirely, by the additional duties of a specific character, which the service continues to discharge in connection

* This does not include leave reserve.

with the feeding of Indian troops and the animals of Indian cavalry.

Stated in elementary form, the purpose for which the transport service exists is to convey the stores and baggage of a military force operating in the field. "An army

Animal transport.

moves on its belly" and without a trained

and efficient transport service an army cannot be mobilised. The majority of transport personnel are in modern warfare required to be combatants. It is therefore necessary to maintain in peace-time a highly developed transport organization: but this can be economically employed in peace on the carriage of military stores in cantonments and on manœuvres, for which commercial transport would otherwise have to be hired.

The quantity and description of the transport required for a military force of a given strength are based upon calculations of an extremely elaborate character, in which the following are the principal factors, namely, the weight and bulk of the supplies consumed daily by the personnel and animals of the force, according to the authorised ration scales—this includes the consumption of the transport units themselves—the weight and bulk of supplies other than food and forage, *e.g.*, baggage and ammunition, the ascertained carrying capacity of the vehicles and animals composing the transport service, the probable length of the lines of communication, and the extent to which supplies of one kind or another can be obtained from local resources. Further, there are different types of transport units, determined by the type of military formation they are designed to serve, and by the character of the terrain in which they are likely to operate. Animal

transport consists of two main divisions—**Wheeled and pack transport.** wheeled transport and pack transport. As explained in another chapter, wheeled transport is the more economical: but the task laid down for the Army in India renders it necessary to provide pack transport on a considerable scale. Finally, for reasons of economy, only a proportion of the transport is maintained in peace-time at full war strength. Other units are maintained in the form of a nucleus capable of fairly rapid expansion to full strength on mobilization.

These two latter categories of units were known before the war as "corps" and "cadre" formations. "corps" and "cadre" respectively.

Transport machinery, however, cannot prudently be reduced below a certain point, more particularly since it is impracticable

to rely to the same extent in India, as in the United Kingdom, on the civil resources of the country for the improvisation of transport machinery in war. Civil resources in India consist mainly of agricultural transport. The impressment of such transport on any large scale causes serious dislocation and is to be avoided as far as possible.

Pre-war and present day establishments.

The pre-war establishment of animal transport consisted of the following units:—

(i) *Wheeled transport.*

- | | | | | |
|--------------|---|---|---|--|
| (a) Mules | . | . | { | 4 cavalry brigade corps; |
| | | | { | 3 cavalry brigade cadres. |
| (b) Bullocks | . | . | { | 72 half-troops of an aggregate strength of 3,642 bullocks. |

(ii) *Pack transport.*

- | | | | | |
|------------|---|---|---|-------------------------|
| (a) Mules | . | . | { | 17 pack corps; |
| | | | { | 15 pack cadres. |
| (b) Camels | . | . | { | 8 silladar camel corps; |
| | | | { | 4 grantee camel corps. |

These last two sources combined were capable of producing 12,816 camels on mobilization.

In addition to the above a certain amount of local mule transport was maintained on an unorganised basis in certain Divisions and Brigades. The total number of mules maintained was 28,949.

The present day (1923) establishment of animal transport is as follows:—

Wheeled and Pack Transport.

Mules—

- 3 cavalry brigade transport companies.
- 9 infantry brigade transport companies.
- 10 divisional troops transport companies.
- 9 mule transport companies (lower establishment).

Bullocks—

- 33 troops (lower establishment) consisting of 858 bullocks.

Camels—

2 government transport companies.

8 silladar transport companies.

3 government transport companies (lower establishment).

The total number of mules maintained under this organization, including the depôts and the detachments in Aden, Kashmir and the Persian Gulf, is 18,443, while the camel units are calculated to produce on mobilization 12,480 camels. There are also 750 pack and draught horses. Wheeled and pack transport are combined. The company on the lower establishment represents the pre-war "cadre," other companies being maintained in peacetime at full war establishment.

It will be observed that the present day establishment shows a considerable reduction in the number of mules and bullocks, as compared with the pre-war complements. This is accounted for partly by reduction in the strength of the field army, and partly by the formation of mechanical transport units.

The strength of the personnel of animal transport units in 1914 and at the present day is shown by categories in the following table:—

Personnel.	1914.	1923.
Officers with King's commissions .	62	75
British other ranks	197	79
Indian officers	66	196
Civilians	98	142
Silladar sarwans	2,848	2,560
Indian non-commissioned officers and drivers	16,643	13,524
Artificers and followers		
		2,162
TOTAL .	19,914*	18,738*

Although designated a corps, the Supply and Transport Corps was, in the strict military sense, a department, that is to say, its officers and other personnel carried no power of command outside their own units. In 1923, it was transformed into the Indian Army Service Corps and acquired the attributes of a corps in reality as well as in name.

* Does not include leave reserve, nor Indian reservists.

Mechanical transport is employed primarily for the same purpose as animal transport, that is to say, for the conveyance of military stores. It is, however, a more rapid

Mechanical Transport Service.

means of conveyance, and has, relatively, a much greater carrying capacity. Mechanical transport is, on the other hand, unless very fully employed, more expensive to maintain and it cannot be effectively used except on roads constructed up to what is known as the mechanical transport standard. The extent to which motor transport came to be employed in all theatres during the Great War is a matter of common knowledge. Before the war the Army in India had no mechanical transport service, but motor transport units of various kinds were formed during the war, and these rendered conspicuously valuable service in the Afghan operations of 1919 and the subsequent operations in Waziristan.

The establishment of the mechanical transport service in India had never been completely stabilised before Lord Inchcape's Retrenchment Committee conducted their enquiries: and even now the establishment to be permanently retained has not been finally

Establishment and organization.

settled. The Retrenchment Committee, however, recommended that the use of mechanical transport in peace-time should be strictly limited, and that a large proportion of the mechanical transport of the Army should be regarded as a reserve for war, the vehicles in peace-time being kept in store as a cadre formation, and a nucleus of skilled personnel retained to look after them and keep them in good condition. The transport establishment which has so far been provisionally approved in pursuance of these recommendations consists of the following:—

Heavy Lorries—

4 service sections, that is to say, sections at strength sufficient to take the field on mobilization.

6 cadre sections.

Light Lorries—

7 service sections.

7 cadre sections.

Apart from units and vehicles employed on the conveyance of military stores, the mechanical transport service also provides motor vehicles for armoured car companies, the tank corps centre,

the sappers and miners, the signal corps, motor ambulance convoys for hospitals and field medical units, and vehicles for other minor miscellaneous purposes. Mechanical transport companies and sections are also attached to batteries of medium artillery for drawing the guns and for other purposes.

The organization as a whole is completed by a central training school, a central stores depôt, mobile repair units and workshops, of which the most important is the large heavy repair workshop constructed after the war at Chaklala. Like the Indian Army Service Corps, the mechanical transport service is administered by the Director of Supply and Transport under the control of the Quartermaster-General.

Exclusive of motor bicycles the total establishment now provisionally contemplated consists of 1,858 vehicles, of which 1,088 will be actively employed in peace-time, while 770 vehicles will be spare and reserve.

The mechanical transport is at present not actually a part of the Indian Army Service Corps. The officers of the service are

Personnel. mainly drawn from the Royal Army Service Corps, since at present there are no facilities

in India for training officers in every branch of mechanical transport duties. The establishment of officers includes, however, a certain number of King's commissioned officers belonging to the Indian Army. The British subordinates of the service are drawn entirely from the Royal Army Service Corps. The establishment is completed by Indian officers with the Viceroy's commission, and Indian other ranks employed as drivers. A large number of Indians with non-combatant status are employed as artificers and followers. The strength and categories of the present provisional establishments are shown in the following table:—

Officers with King's commissions	145
British other ranks	533
Indian officers and other ranks	2,109
Civilians	325
Indian artificers	1,253
Followers	1,063
TOTAL	5,428

Chapter XV—The Ordnance Services

THE Ordnance Services may be broadly described as the agency whose duty it is to supply the army with munitions of war, such as small arms, guns, ammunition, and other equipment of a technical military character, and also, under an arrangement introduced in recent years, with clothing and general stores other than engineering stores. For the purposes of the present account of the Ordnance Services of the Army in India, the year 1875 is a convenient starting point.

A Retrospect—1875-1884.

Before that date the organization of the Ordnance Services conformed to the system of Presidency Armies. There were three main Ordnance Departments, Bengal, Bombay and Madras, each with its administrative head, designated at the time Inspector General of Ordnance and Magazines, who controlled a number of centres of manufacture, storage and distribution of munitions for the use of the troops in the respective Presidency Armies. There was also a fourth Ordnance Department, a miniature organization, designed solely for the supply of that interesting body the Hyderabad Contingent. This Hyderabad Ordnance Department had its small depôts in the Contingent stations at Bolarum, Ellichpur and elsewhere, and was itself attached to and supplied from the Madras Ordnance.

The conditions in the several Presidencies varied widely. The supply centres termed "arsenal," "magazine," and "depôt" had come into existence almost haphazard, as, from time to time, the needs of the troops required. The country had been occupied on no settled plan and communications were often poor. Consequently the number of centres, judged by present day standards, was out of all proportion to the real necessities of the situation. Taking the whole of India together, there were in 1875 some thirty-four ordnance arsenals, magazines and depôts. Factories had been established in the same way, not with reference to the aggregate requirements of India as a whole, but solely with reference to the needs of each individual Presidency. Thus there were ten factories devoted to the manufacture of guns, gun carriages and other vehicles, and, to a much smaller extent, to the manu-

ufacture of gun ammunition and gun powder. Small arms and ammunition were either obtained from England or manufactured in the arsenals.

In the year 1875 a special ordnance commission, composed of experienced ordnance and staff officers, was created by the Government of India to investigate this condition of affairs, and to detail the reforms which were manifestly desirable. The recommendations of this body established the principles on which, broadly speaking, ordnance supply has been regulated ever since.

The recommendations separated clearly two aspects of the problem of ordnance supply. On the army side, it was laid down that regular schedules of equipment to be held by units should be formulated; that the extent to which reserves of such equipment might be held by the units should be defined; and that replacements should be conducted on a uniform system. On the ordnance side, it was recommended that storage and distribution should be concentrated in a minimum number of large centres, and that all superfluous outlying establishments should be abandoned. Incidentally, the term "magazine," to denote a general distribution station, was abolished and the terms "arsenal" and "dépôt" were prescribed for large and small establishments respectively, a practice which still holds good to-day. At the same time the commission laid down principles on which reserves of ordnance stores in arsenals were to be calculated. A uniform system of internal economy and procedure was also formulated.

Similarly, the number of factories was considered and concentration suggested. The location of arsenals and factories was then examined, and it is interesting now to note that a minority were in favour, even at that date, of the construction of an arsenal at Kirkee in place of the Bombay arsenal then existing, and that the whole commission recommended the reduction of the number of gun carriage and gun powder factories. Finally the report dealt with the co-ordination of the personnel of the services and their organization on one uniform system.

This commission was followed in 1879 by the "Army in India Commission." The latter's chief contribution to ordnance history was a proposal that the several ordnance departments should be amalgamated into a single organization.

The outcome of these two Commissions was a complete revolution in the structure of the ordnance services in India. The

The results of the 1884 reorganization. number of centres was reduced, storage and distribution were concentrated in the

larger establishments, personnel were co-ordinated and organized on uniform lines, and in the year 1884 the several ordnance departments were amalgamated. In this way in 1884, the Ordnance Department in India, a single body controlled by a single head, the Director-General of Ordnance in India, came into being: and from this date the modern history of the Indian ordnance services begins.

From the earliest days in India, until quite recently, the ordnance service had been inseparably allied to the artillery arm.

The personnel of the Ordnance Services.

Indeed, in its beginnings, the ordnance formed an offshoot of the train of the artillery. Accordingly, a hundred years ago the Presidency ordnance organizations were staffed in every rank from the East India Company's artillery. The officers served for a term in the ordnance and returned to their batteries; the other ranks, after a period of probation, were permanently posted to the ordnance and served for pension on special terms.

After the mutiny, when the East India Company's artillery ceased to exist, and the Royal Artillery took their place, the old system of staffing the ordnance continued. The Royal Artillery officer served a term in an arsenal or factory, and returned to his battery: while the non-commissioned officers of that battery furnished the recruits for the lower ranks of the department. In 1884, therefore, when the reorganization took place, it was not a very difficult task to amalgamate the Presidency lists of Royal Artillery officers. These officers retained their regimental military rank and promotion, and it was only the departmental grading which required to be adjusted. A material change was that the Royal Artillery officer became liable to serve in any part of India and in any arsenal or factory. Subsequently, it was found desirable for technical and other reasons to retain Royal Artillery officers continuously in the Ordnance Department: and a system of continuous service was introduced in 1890. The new conditions of service continued to govern the recruitment of Royal Artillery officers for the Ordnance Department for 30 years: and the next important change of system came in 1922 when the ordnance services were opened to officers belonging to all branches of the army and the monopoly of the Royal Artillery officer came to an end.

On the other hand, the subordinate European, and also the subordinate Indian establishment, had been attached permanently to the Ordnance Department, and accordingly they were borne

upon their respective Presidency lists. When the reorganization of 1884 took place, the problem of amalgamating these establishments arose: but the difficulties of adjusting the different conditions of service proved too formidable, and, in the end, the department was left with the handicap of subordinate personnel belonging to three separate establishments, whose promotion continued to be governed by different factors.

The organization of the new department retained another trace of the Presidency system. It was necessary to sub-divide control to some extent, and this was effected by placing under the Director-General of Ordnance three Inspectors-General of Ordnance who controlled all arsenals and factories in their respective areas of administration.

The number of ordnance institutions had, however, been reduced to twenty-six.

The abolition of the Presidency Armies found the ordnance department already organized in four main sub-divisions. The Bengal Presidency area had proved too large—containing as it did a number of the most important ordnance factories, those near Calcutta, as well as many great arsenal centres—and had been sub-divided into Bengal and the Punjab, each under an Inspector-General of Ordnance. No further change was required to adapt the Indian Ordnance Department to the four command army organization.

**Further developments
after 1884.**

In 1898 the factories were removed from the control of the various Inspectors-General of Ordnance and placed directly under the Director-General of Ordnance in India. The change reflected, amongst other things, the greater importance which was beginning to be attached to the industrial and commercial aspect of factory administration, and the consequent need for centralised and specialised direction. The years immediately following contain further evidence of the development of ordnance policy on the technical side. A special establishment was instituted for the testing of guns and ammunition on the sands of the Bay of Bengal at Balasore. The old gun-powder factories at Kirkee and Ishapore were closed and on the site of the latter a rifle factory was built. The three gun-carriage factories at Madras, Fatehgarh and Bombay were shut down, and the present large central factory at Jubbulpore established. The Cossipore Gun and Shell Factory was strengthened by the opening of a large branch for steel work at Ishapore.

In the meantime the arsenal side had not been neglected. Further substantial progress was made in carrying out the policy of concentration. Several small outlying arsenals, such as Bellary and Mhow, and depôts like Trimulgherry and Mandalay, were closed. About the same time a large arsenal was built at Kirkee, and the unprotected Bombay arsenal was reduced to a depôt: while, following the movement of the military centre of gravity towards the frontier, supply was concentrated in the Rawalpindi, Quetta and Ferozepore arsenals—the two former had been started as depôts in the Afghan War of 1879—and the Fort William and Karachi arsenals were also converted into depôts.

Proposals for further reorganization and reform came under consideration in the years 1908–1910, and the scheme finally approved was brought into force in 1912.

The Reorganization of 1912.

The new scheme consisted in the sub-division of the Indian Ordnance Department into 3 units corresponding to the different spheres of ordnance activities, namely, manufacture, represented by the factories, storage and distribution, represented by the arsenals, and inspection. Manufacture and storage had already been separated to some extent, as is witnessed by the placing of the factories under the direct control of the Director-General of Ordnance in 1898. The inspection of stores in the course of manufacture, which had hitherto been a part of the responsibility of the factory staff, had, with the expansion of manufacture, acquired an increasing importance, and it was now considered necessary to make separate provision for this function. The three sections, that is to say, the factory section, the stores section, and the inspection section, were placed directly under the control of the Director-General of Ordnance, but each was given a separate Director, and its subordinate units were separately organized. In the case of the factories and arsenals, little was involved beyond a change of procedure and system, which there was little difficulty in effecting. For the duties of inspection a new organization had to be created, and this was built up from groups of "charges." For example, the inspection of guns and rifles was constituted a separate "charge" under a senior officer of the department.

The general effect of the reform was to create an organization which, while still capable of being directed by one individual, was conveniently parcelled out into separate units, each complete with its own administration. The arrangement was flexible, and allowed for the manipulation or expansion of each unit separately

—a quality which was of signal service a few years later—and it rendered possible, without vital disturbance, the excision of any branch from the parent stem, a process which, as will be seen later, actually took place during the Great War.

About the same time, the number of arsenals and factories was further reduced. Since 1911 there have been seven main arsenals and seven factories, together with four or five small depôts, as compared with the thirty-four arsenals and depôts and ten factories of 1875.

About the same time, also, certain steps were taken to bring Indian practice into line with ordnance administration in the United Kingdom as recently developed. It had become the custom in the United Kingdom to place an administrative ordnance officer on the staff of each Command, styled the Assistant Director of Ordnance Services; the object of the arrangement being to bring the officers responsible for ordnance supply into close touch with the consumers, that is to say, the troops. In India, with the divisional organization of the time, precisely the same arrangement could not be introduced, but the supply areas of the 7 main arsenals were made co-terminous with military divisions, the Rawalpindi arsenal, the Ferozepore arsenal and the Kirkee arsenal being allotted two divisions each; and the ordnance officers in charge were attached to the divisional staffs with the designation of Assistant Director of Ordnance Services and given two-fold responsibilities, namely, to the ordnance department on the one hand, and to the General Officer Commanding the troops on the other.

Specially heavy responsibilities devolved upon the Indian Ordnance Department at the outbreak of the Great War. These

continued while the war lasted, and indeed, for a long time after the conclusion of hostilities, the Ordnance Department had a stupendous task to perform in disposing of accumulations of war material, and generally in evolving peace time order out of the chaos of the war and its aftermath. The embarrassments of the war belong to another story. Because of its influence on subsequent events, however, it is necessary to mention the fact that during the war, an Indian munitions board was created, which was made responsible for the control of ordnance factories, the provision of ordnance stores to supplement factory outturn, the direct supply of stores from the trade to arsenals and overseas depôts, and the whole of the manufacture and supply of clothing for the army. The Indian Munitions Board was abolished when the war came to an end; but it

supplied the impulse out of which has been created the Indian Stores Department, a peace organization created for the purchase of stores required by the central departments of the Government of India, with the object, amongst other things, of developing the indigenous resources of India. Under an arrangement recently introduced, the Indian Stores Department has been entrusted with the duty of purchasing in peace time certain categories of army supplies, other than lethal munitions and technical military stores, and it is intended that this sphere of its activity should be further extended.

In 1918, a further process of reform commenced with a suggestion that the ordnance supply services in India, that is to say, the arsenal side of the Indian Ordnance Department, should be reorganized on the principles followed in the United Kingdom.

The post-war reconstruction.

The essence of the proposal was that the administration of the arsenals should be severed from that of the other ordnance services, that the arsenal organization should be transferred from the control of the Director-General of Ordnance to the Quartermaster-General, and that clothing and certain stores, which had formerly been dealt with by the Supply and Transport Corps, should become articles of ordnance supply. These proposals were accepted, and the change was carried out. Further readjustments of duties followed, by a more or less natural process of evolution. It is not easy to disentangle, and indeed it is hardly necessary to describe, the intermediate developments. The final result was the separation of the Ordnance Department into two organizations, namely

The Indian Ordnance Department.

the Indian Ordnance Department and the Indian Army Ordnance Corps. The Indian Ordnance Department is controlled by the Director-General of Ordnance in India, and its functions are the manufacture, and the inspection during the course of manufacture, of lethal munitions and of other military equipment, except clothing. The Director-General of Ordnance consequently retains the control of the ordnance factories, the conduct of which is now definitely organized upon a commercial and industrial basis, civil officers being employed to a very large extent in replacement of the former staff of Royal Artillery officers. The Indian Army

The Indian Army Ordnance Corps.

Ordnance Corps is administered by the Director of Equipment and Ordnance Stores, under the supervision of the Quartermaster-General in India. Its functions are the storage, and distribution

to the troops, of army supplies, derived from the ordnance factories and other sources, and the manufacture of clothing for the army. The Director of Equipment and Ordnance Stores, acting under the orders of the Quartermaster-General, controls the arsenals, ordnance depôts and clothing depôts, and is responsible for furnishing the troops, in barracks and in the field, with arms, equipment, clothing and boots.

In addition to supplying the troops, the Director of Equipment and Ordnance Stores is responsible for the inspection of ordnance equipment and clothing in the hands of the regular army, the Royal Air Force, and the Auxiliary and Territorial forces. This is the final development of the system which, as we have seen, was introduced in a rudimentary fashion in 1911. In carrying out this new service, the Director of Equipment and Ordnance Stores is assisted by two Deputy Directors of Ordnance Services attached to the Army Commands, and by a Deputy Assistant Director of Ordnance Services in each of the military districts, except Burma. The Deputy Assistant Directors of Ordnance Services, in addition to inspecting equipment, other than technical equipment, are inspecting ordnance officers for ammunition and explosives. Inspectors of Ordnance Machinery located in various arsenals inspect artillery, ordnance vehicles and connected equipment in the areas allotted to them, and similarly Civil Chief Master Armourers (or Circuit Armourers) inspect small arms, machine guns and bicycles.

The inspecting staff of the Director of Equipment and Ordnance Stores is completed by an Inspectorate of general stores located at Cawnpore, consisting of a Chief Inspector of general stores, an Inspector and Assistant Inspector of general stores, an Inspector of harness and saddlery, and Inspectors of clothing, and clothing stores, such as unmanufactured material. All these officials are charged with the inspection of the various stores with which they are concerned, prior to their being accepted by the store-holding organization.

On the side of the Director-General of Ordnance also efficient arrangements for inspection have been instituted, including a Proof and Experimental Officer whose duties are to "prove" ordnance, artillery vehicles, and ammunition made in India, and to carry out such experimental work as is possible at present in India. And in order that the department in India may be kept in touch with scientific developments in the United Kingdom, an

THE EVOLUTION OF THE ARMY IN INDIA

Ordnance Consulting Officer and an Assistant Ordnance Consulting Officer are employed at the India Office.

The present organization of the ordnance services in India is shown in graphic form in Appendix XVI.

Chapter XVI

The Remount and Veterinary Services

THE REMOUNT SERVICE.

IN 1913 the organization of the Remount Department in India was as follows:—

- (i) The Remount Directorate at Army Headquarters consisting of the Director-General of the Remount Department; a Staff Veterinary Officer and Personal Assistant to the Director-General.
- (ii) 17 Superintendents.
- (iii) 2 Assistant Superintendents.
- (iv) 9 Veterinary Officers.

The functions of the department were limited to purchasing, rearing and issuing remounts to British cavalry and artillery units and the 3 non-silladar regiments, and to the supervision of horse, mule and donkey breeding in certain selected areas. To

Pre-war organization and duties.

all intents and purposes the interest of the department in an army horse ceased once the animal was issued from a remount dépôt. In particular it was charged with no responsibility for the following matters:—

- (a) Army transport animals, except for their actual purchase.
- (b) The organization of the animal resources of the country for war.
- (c) The fitness of the animal life of the army and all its contingent questions.
- (d) The mobilization of fighting units or of transport.
- (e) The mobilization of remount units for the field.
- (f) The provision of officers' chargers except the issue of a very small number.
- (g) The control and distribution of horses in units.

The defects of the system are obvious. Stated generally the situation resulting was that remount officers were not sufficiently

familiar with the animal life of the Army or animal requirements in war.

The specific liabilities of the Remount Department in 1913 lay in maintaining the following peace establishments:—

(i) British cavalry regiments .	5,049 horses.
(ii) Royal Horse and Royal Field Artillery units .	14,845 horses.
(iii) Mountain Artillery .	3,760 mules.
(iv) Certain other units .	{ 386 horses. 2,294 mules.
(v) Non-silladar cavalry regi- ments	1,536 horses.
TOTAL .	{ 21,816 horses. 3,760 ordnance mules. 2,294 equipment mules.

The following war reserve had also to be maintained:—

Cavalry horses	500
Artillery horses	500
Ordnance mules	200

In addition the department was responsible for the administration of six horse-breeding circles involving, *inter alia*, the maintenance of 3,000 young country-bred horses and 3,000 young mules, furnishing some 400 cavalry horses and 900 mules a year. The breeding arrangements had been instituted for the purpose of developing indigenous resources and diminishing India's dependence on imported animals.

The animals held by the department were accommodated in remount depôts as under—

Depôt.	Establishment.
Saharanpur	1,040 horses.
Babugarh	898 horses.
Mona	{ 1,500 horses. 1,500 mules.
Sargodha	{ 1,500 horses. 1,500 mules.
Ahmednagar	505 horses.
Hosur	573 horses.

There was also a depôt at Calcutta used as an inspecting and transit depôt for imported horses bought at the port.

The six horse-breeding circles were—

The Jhelum Canal Colony Circle.

The Chenab Canal Colony Circle.

The Baluchistan Canal Colony Circle.

The United Provinces Canal Colony Circle.

The Lahore Canal Colony Circle.

The Rawalpindi Canal Colony Circle.

The purchase of horses was carried out by the superintendents of the horse-breeding circles, while four special officers were detailed for mule purchasing in India and abroad.

The pre-war cadre of the Remount Department was restricted to the numbers required to carry out the duties enumerated above. Consequently on the outbreak of war there was no reserve from which to supply the officers required for administrative remount duties in the field. Moreover the silladar cavalry had no organization for remounting in war and their peace system was absolutely uncontrolled. The remounting of this arm had therefore to be undertaken in war by the Remount Department.

As a result of the experience gained in the Great War, and of the changes in army organization resulting therefrom, certain additional responsibilities have been imposed on the remount service, of which the most important are :—

**Post-war organization
and duties.**

- (1) The mounting of the whole of the Indian cavalry.
- (2) The provision of camels and draught bullocks for all units and services.
- (3) The maintenance of 68,344 animals as against 53,579 pre-war.
- (4) The enumeration throughout India of all animals available for transport in war.
- (5) The animal mobilization of all units, services and departments of the army.
- (6) A general responsibility for the efficiency of all the animals of the army both in peace and war.
- (7) The administration of the remount squadron formed in 1922 as a nucleus for expansion into three squadrons on mobilization.
- (8) Breeding operations of a direct character and a new horse-breeding area.

For the performance of the above additional duties the officer cadre of the department has been increased by 17 officers, and the department is now organized on lines corresponding to the remount service in the United Kingdom. Its composition is as follows:—

- (i) The Remount Directorate at Army Headquarters consisting of one Director and a Deputy Director.
- (ii) 4 Remount Inspectors, one attached to each Command Headquarters.
- (iii) 4 Deputy Assistant Directors of Remounts of Circles.
- (iv) *Executive officers*—
 - (a) 7 Superintendents of Remount Depôts.
 - (b) 6 District Remount officers of horse-breeding areas.
 - (c) 15 Assistant Remount officers.
- (v) 9 Veterinary officers.

The 15 Assistant Remount officers take the place of the officers of the late silladar regiments, who were employed in pre-war days to purchase and supervise the rearing of horses for their respective silladar regiments.

The duties of the various divisions of the organization are:—

The Remount Directorate is responsible for the control and administration of the service as a whole and its personnel.

The Remount Officers attached to Command Headquarters act as advisers to Army and District Commanders and generally supervise the conduct of the remount service and the distribution of remounts in the Commands.

Deputy Assistant Directors of Remounts of Circles are responsible for the general supervision of the remount depôts and horse-breeding areas, for the purchase of animals and for enumeration.

Executive Officers are responsible for management of remount depôts including the acclimatization of imported animals, the supervision of breeding, and the rearing of young stock at the young stock runs.

THE VETERINARY SERVICE.

Before the Great War the chief, in fact practically the sole, normal responsibility of the Army Veterinary Service in India was

Pre-war organization and establishment. the veterinary care of animals of British units. In the case of Indian units, including animal transport units, the responsibility for the veterinary care of animals lay with the units themselves, except in the event of an outbreak of contagious disease, when the Army Veterinary Service assumed control.

The department was then controlled by a Director of Veterinary Services, assisted by a Deputy Assistant Director, at Army Headquarters. India was divided into 3 circles, Northern, Central and Southern. In each of these the director was represented by an Inspecting Veterinary Officer, whose duties were purely administrative.

Including the veterinary officers serving with the remount department, the establishment of the Army Veterinary Service in India comprised 64 officers of the Army Veterinary Service and Army Veterinary Corps, who were detailed by the War Office for a tour of duty in India. There were also 23 British warrant officers and non-commissioned officers, belonging to the Indian Unattached List. The remainder of the personnel, with the exception of clerical establishments, was borrowed from mounted units. It was the rule then that animals admitted to veterinary hospitals should be accompanied by syces from the units to which they belonged; and by this expedient separate subordinate personnel of hospitals were restricted to a minimum.

During peace, field veterinary units of the following categories were maintained to meet the requirements of war:—

Field veterinary sections.

Base dépôt veterinary stores.

Field veterinary offices.

The veterinary assistants of Indian units and of the remount service were part of the establishment of the unit and of the remount department respectively. Units in possession of veterinary assistants also had their own veterinary sick lines, and authorised scale of equipment and medicines, mainly on a percentage basis. This system of allotment of personnel and material was unnecessarily extravagant; and, for unit mobilization, veterinary equipment on the authorised scale proved in many cases to be in excess of actual requirements.

During the War the staff of the Director at Army Headquarters was augmented, and the circle system of administration was

Changes introduced during the war. at first continued. The majority of regular veterinary officers were sent overseas with expeditionary forces, and their places in India were filled by territorial and temporary veterinary officers, who, however, were difficult to obtain in the required numbers. The requirements in other categories of veterinary personnel during the war were greater than could conveniently be supplied by regimental units. It was decided in the end that no further Indian combatant personnel could be detailed without replacement from combatant units for any of the non-combatant services and departments. A policy of borrowing personnel for the veterinary service was then resorted to but proved a failure.

The following field veterinary units, other than Field veterinary sections, Base dépôt veterinary stores and Field veterinary offices were formed during the war:—

- Mobile veterinary sections.
- Stationary veterinary hospitals.
- Field veterinary hospitals (camels).
- Convalescent horse dépôts.
- Convalescent camel dépôts.

Towards the end of the war the Circle System of Inspecting Veterinary officers was replaced by a Divisional system, each Division having its Deputy Assistant Director of Veterinary Services, as it was found that the Circle System was inadequate. Subsequently, on the introduction of the four-command scheme, decentralization of the duties hitherto performed by the Directorate at Army Headquarters was effected, and it was found feasible to place the Deputy Assistant Director of Veterinary Services of Districts in executive charge of the veterinary hospitals in addition to their administrative duties.

The pre-war arrangements were obviously of an arbitrary and makeshift description, and the more regular and scientific plan on which the whole army was reconstructed after the war naturally included the formation of a self-contained Army Veterinary Corps, India, which combined in one organization all personnel required for the veterinary supervision and treatment of the animals of the Army in India. The pre-war system of divided control was abolished and the Army Veterinary Corps, India, was made responsible for the veterinary care, in peace and war, of mounted British troops, Indian cavalry

and artillery, I. A. S. C. units, the remount department (excluding horse breeding operations), etc. The Corps now includes therefore :—

- (a) The establishment of Royal Army Veterinary Corps officers, serving on a tour of duty in India.
- (b) The establishment of warrant and non-commissioned officers, India Unattached List.
- (c) All veterinary assistants.
- (d) The clerical establishment of the Army Veterinary Service.

The Army Veterinary Corps, India, is organized in 12 sections, attached in peace time to class I station veterinary hospitals at certain important stations. The present authorised establishment for the corps is as under :—

(i) Officers R. A. V. C.	73
(ii) Veterinary assistants	153
(iii) Indian other ranks	615
(iv) Clerical establishment	50
(v) Followers	90

The British warrant and non-commissioned officers of the India Unattached List are being replaced by Indian other ranks, as the former become non-effective by discharge to pension or for other causes.

The Indian other rank personnel maintained in peace provide in war (1) the establishment for field army veterinary units (mobile veterinary sections) and (2) non-commissioned officers and technical personnel for lines of communication, stationary and base veterinary units. The grooming personnel for these units is obtained by the enrolment of syces left behind by the mobilized cavalry and artillery units.

An Army Veterinary Corps Depôt has been formed at Ambala for the supply of personnel to all veterinary units in India in peace and war. In addition a record office of the Army Veterinary Corps has been formed at Ambala to deal with the records of all the personnel of the corps, with the exception of British officers.

The following units are held in readiness, during peace, for war :—

- Mobile Veterinary Sections.
- Field Veterinary Hospitals.
- Field Veterinary Hospitals (Camels).
- Stationary Veterinary Hospitals.
- Convalescent Horse Depôts.
- Convalescent Camel Depôts.
- Base Depôts Veterinary Stores.
- Field Veterinary Offices.
- Army Veterinary Corps Depôt (war).

Chapter XVII

The Auxiliary Force, India, and the Indian Territorial Force

THE Auxiliary Force, India, is a new name for a force which first existed in India more than half a century ago. A volunteer force first made its appearance in India

The Auxiliary Force, India. in 1857. The Madras Guards are the oldest

regiment in the force, having been raised in 1857 as the Madras Volunteer Guard. After three or four years, other infantry regiments were constituted. In the next decade mounted volunteer corps made their appearance. Artillery came into being in 1879, the Madras Artillery Volunteers being raised in Madras, and the Rangoon Volunteer Artillery in Rangoon in that year. The big railway companies in India commenced the formation of Infantry battalions from railway personnel in 1869, when the East Indian Railway raised a battalion, known as the East Indian Railway Volunteer Rifle Corps.

When these regiments were first raised, they were all included under the general heading of "volunteers." They were recruited from Europeans and Anglo-Indians, resident or domiciled in India, and organized on the same lines as regular regiments of the British Army. They were trained for the special object of local security, this having been the rôle of volunteers in India since the original formation of the force. Each regiment of volunteers was given an adjutant, who was seconded from a regular regiment. The remaining officers of the regiment were volunteers. No definite obligations were imposed on enrolled men as to the amount of training to be done and the standard of efficiency varied greatly in different units.

The volunteer system in India before the Great War was not conspicuously efficient, and, when the war commenced, it became evident that steps would have to be taken to improve matters. Volunteers were being used in many cases to relieve regular garrisons of their ordinary routine work, but the regulations limited their use to local boundaries, and for this and other reasons the force could not be employed as a whole or to its full

capacity. Public bodies passed resolutions recommending some form of compulsory service: the question of defining anew the rôle and obligations of the volunteer force was taken up by Government: and in 1917 the Indian Defence Force Act was passed. This was a war measure to introduce compulsory service for European British subjects in India, to meet the needs of an Imperial emergency. Under the Act all European British subjects, with certain exceptions, between the ages of 18 and 41 became liable for military service. At the same time, certain units of the Indian Defence Force were opened to volunteers, who were British subjects but not Europeans.

The Act remained in force till 1920, with various amendments concerning the age up to which men should serve, and the territorial limitations of service.

After the war the question of universal training for European British subjects came up for consideration, and it was decided that in India, as elsewhere in the Empire, the adoption of compulsory military service would be undesirable. It was recognized however, that India needed some adequate auxiliary force, if only on a voluntary basis, that could be trained to a fairly definite standard of efficiency: and in the result, an Act to constitute an Auxiliary Force for service in India was passed in 1920. Under this Act membership is limited to European British subjects, and the liability of members for training and service is clearly defined. Military training is graduated according to age, the more extended training being carried out by the younger members, the older members being obliged to fire a musketry course only. It was laid down that military service should be purely local. As the form of service that would be most suitable varies largely according to localities, the local military authorities, acting in consultation with the advisory committee of the Auxiliary Force area, were given the power of adjusting the form of training to suit local conditions.

The Auxiliary Force comprises all branches of the service, cavalry, artillery, engineers, infantry—in which are included railway battalions, machine gun companies, and the R. A. S. C. sections. The organization is that of regular units of the British Army, a regular adjutant being appointed to each regiment, battalion, and artillery brigade. The composition of each regiment and battalion has been defined but is liable to alteration, where necessary, to suit local conditions. An infantry battalion is not necessarily composed entirely of infantry, nor a cavalry

regiment of cavalry. In the composition of any one of these may be included sub-units of any branch of the service. An innovation which has been introduced into the Auxiliary Force, is the light motor patrol. This consists of one or more sections each equipped with a Lewis or Vickers gun, the equipment and personnel being carried in unarmoured motor cars.

Units of the Auxiliary Force are under the command of the local military authority, and the latter has the power of calling them out for service locally in a case of emergency. Their rôle is to assist in home defence. In some stations, *e.g.*, Delhi, Agra, Lucknow, etc., Auxiliary Force units of different arms are grouped together permanently, under an Auxiliary Force Commanding officer, for administration and immediate command. In other places, each unit is under its own commander, who is responsible for the unit to the local military commander.

Training is carried on throughout the year. Pay at a fixed rate is given for each day's training and, on completion of the scheduled period of annual training, every enrolled member of the force is entitled to a certain bonus.

Men enrol in the Auxiliary Force for an indefinite period. An enrolled person is entitled to claim his discharge on the completion of four years service or on attaining the age of 45 years. Till then he can only be discharged on the recommendation of the advisory committee of the area.

The constitution of the Indian Territorial force, under an Act passed in 1920, was primarily the outcome of the new political conditions introduced into India by the Montagu-Chelmsford Reforms of 1919. Self-government cannot be a complete reality without the capacity for self-defence, and, when the first phase of representative institutions was established, the political leaders of India naturally claimed that Indians should be given wider opportunities of training themselves to defend their own country. The Territorial force is, in fact, one of the several aspects of the Indianization of the military services, which has been previously mentioned as an important feature of the present day history of the Army in India. The force is intended to cater, amongst other things, for the military aspirations of those classes of the population to whom military service has not hitherto been a hereditary profession. It is intended, at the same time, to be a second line to, and a source of reinforcement for, the regular

The Indian Territorial Force.

Indian army. Membership of the force for this latter reason carries with it a liability for something more than purely local service or home defence. It may, in certain circumstances, involve service overseas.

The force is the direct successor of the Indian section of the Indian Defence Force created during the war. It has been modelled on the old militia in England. The essence of its scheme of organization consists in training men by means of annual embodiment for a short period in successive years. By this means Indian Territorial Force units can be given sufficient preliminary training in peace to enable them, after a comparatively short period of intensive training, to take their place by the side of regular units in war.

The Indian Territorial Force consists at present of two main categories, provincial battalions, and the university training corps battalions. The latter are recruited from the staff and students of Indian universities. They train all the year round, and they are equipped with a permanent staff of British instructors. On ceasing to belong to a university, a member of the corps is discharged. In the case of the university training corps battalions, it is not intended to enforce the liability to render actual military service. Their purpose is mainly educative, to inculcate discipline and form character. But incidentally they are expected to be a source of supply of both officers and men for the provincial battalions.

The members of the provincial battalions accept the full liability for service which has been mentioned. Seven such battalions were constituted in the first instance. The number has since been raised to twenty and, though the unit establishment has not been completely filled in all cases, the movement has already achieved a greater degree of success than might have been anticipated at so early a stage. It is in contemplation to diversify and extend the scope of the force by constituting some ancillary units. Although for the present the infantry arm only, has been created, the force by law may include every other army service. The infantry battalions already raised are organised generally on the same lines as regular Indian infantry battalions, and are each affiliated to a regular Indian infantry regiment. The total strength of the force is at present (1923) limited to 20,000.

Men enrol in the provincial battalions for a period of six years, the period being reduced to four years in certain cases. On the

completion of the first period they can re-enrol, voluntarily, for further specified periods. During his first year, every man does twenty-eight days preliminary training, and during every year he receives twenty-eight days periodical training. The battalions are embodied for this purpose for the required period, each battalion being assembled, as a rule, at the headquarters of the training battalion of the regular Indian infantry regiment to which the territorial battalion is affiliated. Training is carried out by a special training staff consisting of regular Indian officers and other ranks, loaned by regular regiments, or of pensioners, who may be engaged for the period of the training. Five regular British officers are attached to each battalion, one of whom is the permanent adjutant, while the other four are the company commanders. During the training period the senior officer of the five commands the battalion; during the rest of the year the adjutant acts as administrative commandant, and the four company commanders are placed at the disposal of the commander of the training battalion of the regular regiment with which the territorial battalion, as above explained, is associated. During embodiment for training, the Indian ranks are treated as regards pay, discipline, etc., as are the ranks of the regular Indian Army. The system of training described has, however, been modified for certain special reasons in its application to the two Parsi pioneer battalions of the Force.

Indian Territorial Force officers receive, at present, as a provisional arrangement, two forms of commission: an honorary King's commission in His Majesty's Indian Land Forces, and, for purposes of command, a Viceroy's commission as an Indian officer in the Indian Territorial Force.

Chapter XVIII—The Indian State Forces

THE Indian State Forces, formerly designated "Imperial Service Troops," consist of the military forces raised and maintained by the Rulers of Indian States at their own

The Imperial Service troops of pre-war days.

expense and for State service. It has been the custom in emergency for State troops to be lent to the Government of India, and the Government of India have on many occasions received military assistance of great value from this source. But the rendering of such aid is entirely at the discretion of the Ruling Princes and Chiefs. Government, on the other hand, provide permanently a staff of British officers, termed "Military Advisers and Assistant Military Advisers," to assist and advise the Ruling Princes in organizing and training the troops of their states. The head of this staff is the Military Adviser-in-Chief, a senior military officer whose services, in a consultative capacity, are at the disposal of all the Darbars which maintain State troops.

In 1914, before the outbreak of the Great War, twenty-nine Indian States maintained Imperial Service Troops. The total strength of all ranks was as follows:—

Cavalry	7,673
Infantry	10,298
Artillery	373
Sappers	741
Signals	34
Camel corps	637
Transport corps	2,723
TOTAL	22,479

At this time, although the standard of efficiency of the Imperial Service Troops was high, their peace and war establishments differed from those of corresponding units of the Indian Army. During the Great War, when, with the characteristic loyalty and generosity of the Ruling Princes of India, the military forces of the

Lean of troops during the Great War.

Darbars were placed at the disposal of His Majesty's Government, and served in the field by the side of regular troops, the dissimilarity mentioned proved a source of weakness: and after the war had ended, the Indian States, like the Government of India, undertook a military reorganization, which in a number of cases has already been carried out. The principal feature of the new arrangements, as adopted more or less generally, is that in future the Indian State Forces should be composed of three categories of troops, namely:—

Class A.—Troops in this class are organised on the present day Indian Army system and establishments, and, with some exceptions, are armed with the same weapons as corresponding units of the regular Indian army.

Class B.—These troops consist of units which are, in most cases, little inferior in training and discipline to troops of Class A; but they are not organised on present day Indian Army establishments. They have, as a rule, retained the system of the pre-war formations. Their standard of armament is pitched lower than that of Class A troops.

Class C.—These troops consist in the main of militia formations which are not permanently embodied. The standard of training, discipline, and armament, prescribed for this class, is generally lower than the standard prescribed for Class B troops.

As a result of homogeneity and improvement in armament and training, it may be anticipated that the value and effectiveness of the State troops will be greatly enhanced.

The actual strength of the Indian State Forces, on the 1st October 1923, amounted to:—

Cavalry	7,499
Infantry	15,464
Artillery	718
Sappers	831
Camel corps	734
Transport corps	1,784
TOTAL	27,030

Chapter XIX

The supply of officers for the Indian Army : the grant of King's commissions in the Army to Indians : the decision to Indianize completely the officer establishment of certain Indian army units.

THERE are two main categories of officers in the Indian Army ; those holding the King's commission and those holding the Viceroy's commission. The latter are all Indians (apart from the Gurkha officers of Gurkha battalions), and have a limited status and power of command, both of which are regulated by the Indian Army Act and the rules made thereunder. The positions which they hold, and the duties which they discharge, have been sufficiently described in the chapters relating to the organization of the combatant units and other army services making up the Indian Army. A large number of them are men promoted from the ranks, and a Viceroy's commission is, by regulation, within the grasp of every Indian recruit who joins the Indian Army. The King's commission is a commission in the army. It is granted by His Majesty the King-Emperor, and the status and power of command of the officers who hold it are regulated by the Army Act, an Act of the British Parliament, and by the rules made thereunder. Until recent years, Indians were not eligible for King's commissions; and, as may be gathered from previous chapters, the establishment of every unit of the Indian army includes officers holding the King's commission, and officers holding the Viceroy's commission, in certain proportions.

King's commissioned officers for the Indian Army are obtained from two sources :—(i) from among the cadets who pass through the Royal Military College, Sandhurst, and
The King's commission. (ii) by the transfer to the Indian Army of officers belonging to British units. The former is the principal channel of recruitment; the latter being only resorted to when, owing to abnormal wastage or for some other special reason, requirements cannot be completed by means of cadets from Sandhurst. When a cadet has qualified at Sandhurst and has received his commission, he becomes, in the first instance, an officer of the

Unattached List, and is posted for a period of one year to a British battalion or regiment in India, where he receives a preliminary training in his military duties. At the end of the year, he is posted as a squadron or company officer to a regiment or battalion of the Indian Army. Administrative services and departments of the army draw their officers from combatant units, as it has hitherto been regarded as essential that every officer should, in the first instance, receive a thorough grounding in combatant duties, and acquire at first hand an intimate knowledge of the requirements of the combatant arms.

The promotion in rank of King's commissioned officers of the Indian Army is regulated by a time-scale up to the rank of Lieutenant-Colonel, but is subject also to certain professional examinations and tests being successfully passed. The rank of Lieutenant-Colonel is in normal course attained at about 26 years' service; promotion beyond this rank is determined by selection.

One of the most momentous decisions of the Great War, so far as the Indian Army is concerned, was that which rendered

The grant of King's commissions to Indians.

Indians eligible to hold a King's commission in the army. This departure, from the point of view of Indian political opinion, and perhaps from other points of view also, was a natural consequence of high appointments in the civil branches of the public service having been thrown open to Indians, and generally of India's political evolution. From a more exclusive point of view, the decision was taken as an appropriate and just recognition of the loyalty and gallantry which had been displayed by all ranks of the Indian Army during the Great War. It was proposed that King's commissions should be obtainable by Indian gentlemen in the following three ways:—(i) by qualifying as a cadet through the Royal Military College, Sandhurst; (ii) by the selection of specially capable and deserving Indian officers or non-commissioned officers of Indian regiments who had either been promoted from the ranks or joined their regiments on direct appointment as jemadar; (iii) by the bestowal of honorary King's commissions on Indian officers who had rendered distinguished service, but whose age and lack of education precluded their being granted the full King's commission.

A number of honorary King's commissions are still granted annually to a limited number of Viceroy's commissioned officers of the class described in the third category mentioned above. Their commissions as the name implies are granted *honoris causa* and

they are not regarded as augmenting the effective establishment of King's commissioned officers. The second of the sources of selection mentioned has since been almost entirely abandoned for the reason that a Viceroy's commissioned officer of this class cannot, as a practical matter, hope to have a normal career as a King's commissioned officer. They must necessarily be commissioned in a junior rank to start with, but cannot be expected to prove their fitness for a King's commission before they have reached an age greater than the age of the 2nd-Lieutenant or Lieutenant who enters the army by the ordinary channel. A Viceroy's commissioned officer is further handicapped by lack of the educational advantages which alone would enable him to pass the subsequent tests prescribed for King's commissioned officers. Accordingly, the promotion of Viceroy's commissioned officers does not afford a solution of the problem of Indianizing the higher ranks of the Army, which is satisfactory either to the individual or to the service. It is the first of the three avenues of selection mentioned which gives the fullest opportunity to the Indian of satisfying a military ambition and of enjoying a military career on terms of absolute equality with the British officer, who, as a general rule, also enters the army by qualifying at Sandhurst.

It was recognised that, in the first instance, there might be difficulties in the way of obtaining Indian candidates for the King's commission, who would be able to compete on equal terms with British candidates for the same career. In the United Kingdom the profession of arms has been followed by members of practically every class of society for many years, whereas in India in recent times the profession had been confined to what are known as the martial classes, who are admittedly backward in education. The system of education obtaining in India is, moreover, not sufficiently diversified or specialised to prepare boys adequately for Sandhurst. To put the matter in a nutshell, an army career as a King's commissioned officer and the most efficient means of embarking upon it were propositions new and unfamiliar to Indian experience.

In order to overcome these difficulties, it was decided that, in the first instance, ten vacancies at Sandhurst should be reserved annually for Indian cadets. The Indian candidates for these vacancies are required to compete amongst themselves in an examination, the standard of which is intended to approximate to that of the entrance examination for Sandhurst held in the United Kingdom. The Indian candidates are also interviewed personally by a selection board, and in the end by the Commander-in-Chief

and the Viceroy, who make the final nominations. Vacancies which are not filled in India, may be filled by the Secretary of State for India from amongst Indian boys educated in the United Kingdom. The successful candidates proceed to Sandhurst, where they are required to satisfy precisely the same tests as their British comrades. In order to obviate financial difficulties, their passages to and from England are borne by Government.

It must be admitted that the first batches of cadets contained an undesirably large proportion of failures. This, however, was not altogether surprising in view of the handicaps which have been mentioned; more recent experience has shown a considerable

**Preliminary training:
the Dehra Dun College.**

improvement in the quality of the candidates presenting themselves: and this may be largely attributed to certain further measures which were decided upon by Government in the light of experience. It was decided, for example, to raise temporarily the age limit, in the case of Indian boys entering Sandhurst, from 19 to 20 years. Indian boys as a rule start their education later than British boys who go to a private school at the age of eight or nine: and the Indian boy who wishes to qualify for a King's commission is subject to the initial disadvantage that he has to pursue his studies in a foreign language. The extra year was designed to redress the balance. But the most practical measure which Government adopted was the establishment of the Prince of Wales' Royal Indian Military College at Dehra Dun, a Government institution for the preliminary education of Indians who desire to qualify for a King's commission in the army through the Royal Military College, Sandhurst.

The Dehra Dun College was formally opened by His Royal Highness the Prince of Wales on the 13th March 1922. It was located at Dehra Dun on the site previously occupied by the Imperial Cadet Corps. A number of suitable buildings were already in existence, and after some additions and alterations had been carried out, these were found sufficient to provide the accommodation required in the first instance. The arrangements so far made enable a maximum of 70 boys to be in residence at the college at any one time, and the normal course of education is planned to occupy six years. These dispositions, it is hoped, will render it possible to provide from Dehra Dun sufficient candidates to fill the ten vacancies at Sandhurst which are at present allotted annually to Indians.

With the exception of three religious teachers, two vernacular teachers and the drawing and manual-training master, the entire instructional staff of the college is British. The commandant is a military officer of experience, and is responsible for the general administration of the college. In addition, he takes part in the training of the older boys. The literary education of the boys is entrusted to a headmaster, with four assistant masters, two of whom are Lieutenants in the Army Educational Corps. A sergeant-major instructor has been included in the establishment for duty with the Cadet Corps, and for the general physical training of the cadets.

All cadets at the college are required to mess together. The dietary is framed in such a way as to avoid offence to the caste or religious susceptibilities of the communities to which the boys belong. The experiment, which is designed to familiarise the boys with customs which it will be necessary for them to follow to a substantial extent, both at Sandhurst and in their future life in the army, has been conspicuously successful, has given rise to no objection in any quarter and has been adopted by the boys themselves with complete approval.

The college includes a hospital of 8 beds for the treatment of minor and infectious cases. Other cases are treated in the Coronation Hospital, Dehra Dun, to which a Government grant-in-aid is made. An assistant surgeon of the Indian Medical Department is included in the staff of the college.

The fees ordinarily payable by each cadet have been fixed at Rs. 1,500 annually, which includes tuition, messing, service and medical attendance. The actual cost of the education at the college is considerably more than Rs. 1,500 a year; but it was decided, after very careful consideration, that, in the first phase of the school's existence, it was essential to give a substantial all round concession in the matter of fees. It is anticipated that the most suitable type of candidates will come from classes that are not necessarily well-to-do; and even those parents who could afford a higher scale of fees would, through lack of experience, probably be reluctant in many cases to incur the full cost of the special course of training which the Dehra Dun College is intended to provide. Literary education up to the standard required for the Sandhurst examination could be obtained at other institutions in India much more cheaply; whereas the object which the Government of India had in view in establishing the Dehra Dun College was to stimulate a general appreciation of the type of

school which not merely provides literary education, but combines with it a scientific system of physical training and the development of character. If this object is achieved, it is contemplated at a later date to charge fees more commensurate with the actual cost of a student's course of training at the college.

Since it is considered desirable to obtain a certain number of cadets from among the sons of Indian officers holding the Viceroy's commission, a class which already possesses an excellent military tradition, the Commander-in-Chief has the right of nominating a certain number of boys belonging to this category, and to admit them to the college at lower fees than the Rs. 1,500 per annum ordinarily charged.

The Dehra Dun College has so far been in existence as a working institution for something less than two years, but it has already shown that it contains the germ of success. It has already sent to Sandhurst a few boys who were permitted to join the college at the age of 16 or 17.

In the period under review, the process of Indianization, different aspects of which have been dealt with in different portions of this book, culminated in a further decision of supreme importance, namely, a decision that eight units of the Indian Army should be completely Indianized. The decision was announced by Lord Rawlinson to the Legislative Assembly in February 1923 in the following terms:—

**The Indianization
of eight regular units.**

“ Sir, with your permission I desire to make a statement to the House. Speaking in this Assembly on the 24th of January last, I expressed the hope that it would be possible to announce at no very distant date what measures are to be adopted in regard to the Indianization of the Indian Army. In the short interval that has elapsed the correspondence, which I then said was proceeding, has been concluded, and I am able to announce to the House the following decision. The Government consider that a start should be made at once so as to give Indians a fair opportunity of proving that units officered by Indians will be efficient in every way. Accordingly it has been decided that eight units of cavalry or infantry be selected to be officered by Indians. This scheme will be put into force immediately. The eight units

to be wholly Indianized will be mainly infantry units, but there will be a proportion of cavalry. They will be chosen judiciously so as to include as many representative types as possible of infantry battalions and cavalry regiments of the Indian Army. Indian officers holding commissions in the Indian Army will be gradually transferred to Indianizing units so as to fill up the appointments for which they are qualified by their rank and by their length of service, and the process of Indianizing these units will then continue uninterruptedly as the officers gain seniority and fitness in other respects, which will qualify them for the senior posts. I have given the House these few details because I think they will be of interest as revealing some of the practical aspects of the change. There is one other point, however, which it is necessary for me to explain. It is that, simultaneously with the Indianization of these selected eight units, Indians who qualify for King's commissions will continue as at present to be posted to the other units of the Indian Army. The number of Indian cadets now sent to Sandhurst each year, if all pass out successfully, is more than sufficient to replace the normal wastage in the eight units alone. I draw attention to this matter as it has a significance which the House I am sure will not fail to appreciate. Once more, before sitting down, I wish to express my gratification that this great step forward has been made. I hope that the people of India will appreciate the importance of the step and will realise also that it now rests with them to justify the decision of the Government. I hope that no effort will be spared to make the measure which has been approved a solid and a conspicuous success. The responsibility which lies before these young men who will officer the Indianized regiments, is no light one. They will have in their hands not only the lives of their men, but also the task of maintaining untarnished the high and ancient traditions of the regiments to which they are appointed. I can assure them that in the new and in the wider career which will now lie open to them they will have the active and the generous

support of the Government of India and of their British comrades in the Army. Their success or their failure will mean much to India. The initiation of this scheme constitutes an entirely new departure which, though limited in its scope is one which may have far-reaching results. I trust that the members of this Legislature and that the people of India as a whole will support the Indian officers of these Indianized regiments with living and practical encouragement, for by this means only can Indianization hope to deserve and to command success."

The units selected for Indianization were:—

7th Light Cavalry.

16th Light Cavalry.

2/1st Madras Pioneers.

4/19th Hyderabad Regiment.

5th Royal Battalion, 5th Mahratta Light Infantry.

1/7th Rajput Regiment (Q. V. O. L. I.)

1/14th Punjab Regiment.

2/1st Punjab Regiment.

The period within which a unit can be completely Indianized in its establishment of officers is determined primarily by the time which it takes an officer in normal course to rise from the rank of subaltern to the command of a regiment. For this reason the experiment embarked upon in 1923 is still in its infancy and it is impossible to gauge what measure of success will be achieved. The significance of the departure and the extent of its implications are self-evident.

Chapter XX—Establishments

EVERY unit which takes the field has two establishments—a peace establishment and a war establishment. The former is governed by two considerations which generally are in conflict with one another, namely the need for economy on the one hand and, on the other, the necessity of ensuring that the war establishment of the unit is not only attained on mobilization, but is also maintained throughout the period during which it is actively employed in the field of operations.

Peace and war establishments.

War establishments of fighting units are primarily determined by considerations of the tactical efficiency of the units themselves regarded separately and also in their relation to other fighting units in the field. Similarly the war establishments of administrative units are governed by their own administrative requirements, as well as by the administrative needs of the army as a whole.

The proportion which the number of fighting and administrative units respectively should bear towards each other is subject to variation, since it is dependent on the nature of the theatre in which the army is likely to operate, the efficiency and armament of the probable enemy, and the progress of scientific invention.

Ratios between fighting and ancillary services.

One of the principal lessons learnt during the Great War was the dependence of the infantry on the other arms for success. Without the adequate support of aircraft, cavalry, artillery, engineers, machine guns, signals and tanks, the infantry were hampered in their movements and handicapped in their operations. Taking the division as the unit, the following are some of the principal modifications in the ratio between the several arms which were made as the Great War progressed:—

- (a) Divisional cavalry was withdrawn and Corps cavalry and cyclists provided instead.
- (b) The proportion of artillery was found to be inadequate and was increased.
- (c) The number of field companies of engineers was increased from two to three and the technical troops were

further strengthened by the addition of a pioneer battalion.

- (d) The Lewis gun was substituted for the Vickers gun within the battalion, and additional Vickers guns were provided as separate units.
- (e) The signals were increased.
- (f) Tanks were provided.

In respect of artillery the accepted figure at the end of the Great War was one gun to 125 bayonets. It was recognised that this figure contemplated a highly organized enemy, and could not be accepted universally. In fixing the proportion for India the principle of increased gun power for the division was accepted to the extent considered necessary mainly as a result of the experience of the third Afghan War, and the proportion now stands at one gun to 380 bayonets.

Artillery and machine guns.

Again in consideration of the demands made during the third Afghan War it was decided to increase the quota of engineers with the division, and, in addition, to provide certain corps units of engineers for the more highly skilled work.

As regards machine guns, a scale much below the Home scale has been adopted, partly owing to the limitations imposed by the terrain on the frontier, and partly owing to the lower standard of armament of any opponents with whom the Army in India is likely to come into conflict on the frontier. The Home scale allows 34 Lewis guns per battalion and 96 Vickers guns per division. In India the scale has been fixed at 16 Lewis guns per battalion and 48 Vickers guns per division.

The signals in India were in their infancy before the Great War, and to all intents and purposes did not exist. A proportion has now been included as a definite part of the field army.

Tanks are still in the experimental stage.

Thus, while adhering to the principles established during the war, the actual ratio between the several arms accepted at Home has been considerably modified and adapted to suit the terrain on the Indian frontier and the degree of armament of the enemy most likely to be engaged there. The present ratio and scales have been evolved as a result of the experience gained both in the Great War and in the third Afghan War of 1919.

Appendix XIII gives a comparison between the establishments of fighting units in 1914 and 1923, and Appendix XVII shows the proportion between the fighting and administrative services in 1913-14 and 1922-23. As regards the latter there are no invariable

**Comparison between
pre-war and post-war
establishments.**

principles which govern the aggregate proportions between the two services, but it should be observed that, as the age becomes more mechanical and technical, so will the numbers of personnel employed in administrative services increase. To keep modern machines and modern technical equipment in working order demands a larger number of administrative personnel than did the upkeep of machines of an earlier and less complicated pattern. Reference to the table will show that in 1913-14 the proportion of fighting to administrative personnel was as 5 is to 1, and that in 1922-23 it is as 3 is to 1. In view of the enormous strides which technical warfare has made during the last eight years the increase cannot be regarded as very remarkable.

Chapter XXI

Training Institutions of the Army in India

THE following institutions exist in India for the higher training of military personnel and for the education of instructors for units:—

Staff College, Quetta.

Senior Officers School, Belgaum.

School of Artillery, Kakul.

Equitation School, Saugor.

Two Small Arms Schools, Pachmarhi and Satara.

School of Physical Training, Ambala.

Machine Gun School, Ahmednagar.

Army Signal School, Poona.

Royal Tank Corps School, Ahmednagar.

British Army School of Education, Belgaum.

Indian Army School of Education, Wellington.

Army School of Cookery, Poona.

Two Army Veterinary Schools, Ambala and Poona.

Indian Army Service Corps Training Establishment, Rawalpindi.

The scientific character of modern warfare has led to a very remarkable development of training and of both general and technical education in the army: and it may fairly be claimed that the Army in India is now, amongst other things, a potent instrument for the education, physical, mental and moral, of the classes who enlist for military service.

The *raison d'être* of all military schools of instruction is that they should teach their students to be teachers; the schools are nerve centres, the students nerves, the formations and units of the Army the members to which the nerves convey intelligent co-ordinated action. Their object is to ensure to all formations and units throughout the army a constant supply of officers, warrant officers, non-commissioned officers and men, provided with a

thorough up-to-date knowledge of various technical subjects, and with the ability to pass on this knowledge.

The purpose of the Staff College is to afford selected officers higher instruction in the art of war than is obtainable in a unit, and instruction also in the duties of the staff. The Quetta college works in close touch with the Staff College of the United Kingdom which is located at Camberley. The system of training at both colleges is the same in all essential features.

The course of training lasts two years and includes periods of attachment to different arms of the service.

Senior Officers' School. The purposes of the Senior officers' school are :—

- (a) To disseminate and inculcate sound tactical principles as laid down in the official training manuals, and to ensure uniformity of method in their application throughout the army.
- (b) To give senior officers of all arms an opportunity of interchanging ideas on all matters connected with the training and administration of units.
- (c) To give higher tactical training to senior regimental officers of all arms than they would normally obtain with their unit or formation.
- (d) To report on officers as regards their ability to conduct the training and administration of a battalion or equivalent unit.

The duration of the course is three months. With certain specified exceptions in the case of departmental officers, all officers of the regular army are required to undergo a course at the school before promotion to the rank of substantive Lieutenant-Colonel or Colonel, or appointment to the command of a unit.

School of Artillery. The objects of the School of Artillery are :—

- (a) To instruct artillery officers and non-commissioned officers in practical gunnery and to train them as instructors.
- (b) To provide the gunnery staff for the artillery practice camps.

- (c) To carry out experiments in connection with problems of gunnery equipment, ammunition, etc., peculiar to India.
- (d) To supply brigade and battery commanders with up-to-date information on drill, equipment, etc.
- (e) To advise the General Staff on the adaptation to Indian conditions of the methods laid down in training manuals.

Four courses are held annually, for the instruction of senior and junior British officers, Indian officers, and British and Indian non-commissioned officers.

The purpose of the Equitation School is to teach equitation in all its branches, and tactics up to a certain standard, to officers and non-commissioned officers of the cavalry and Royal artillery, with a view to ensuring a uniform system of training throughout these two arms.

A short course of six weeks and a long course of seven months are held annually.

Small Arms Schools. The purposes of the Small Arms Schools are:—

- (a) To train officers, warrant and non-commissioned officers to act as instructors in the use of small arms, namely rifle, bayonet, pistol, Lewis and Hotchkiss guns, hand and rifle grenades.
- (b) To teach the technical properties and tactical handling of these weapons; to teach the principles of fire tactics, and by means of demonstration and object lessons to illustrate fire power, methods of employment of fire and their value under various conditions.
- (c) To carry out such trials of small arms and ammunition as Army Headquarters may require.

All British officers of cavalry and infantry are required to qualify at a small arms school before promotion to the rank of major; also non-commissioned officers of Indian cavalry and infantry before promotion to the Viceroy's commission.

The duration of the qualifying course is three months.

School of Physical Training. The objects of the Army School of Physical Training are:—

- (a) To ensure unity, continuity, and progress in physical training and its correlated subjects.

- (b) To instigate and promote research work in connection with the development of physical education in the Indian Army.
- (c) To train officers to be physical training instructors and non-commissioned officers to be assistant instructors in units.
- (d) To train selected officers and non-commissioned officers for the Army Physical Training Staff.

The duration of the qualifying course is three months.

The purpose of the Machine Gun School is to train officers, warrant and non-commissioned officers as instructors in the technique and technical employment of machine guns, and to ensure that a co-ordinated doctrine in these matters is disseminated throughout the Army in India.

The duration of the qualifying course is two months.

The object of the Army Signal School is to train officers and non-commissioned officers of British and Indian units as instructors and assistant instructors, respectively, and so to ensure that regimental signalling personnel throughout the army are trained on a uniform system.

The duration of the qualifying course is three months.

Royal Tank Corps School. The objects of the Royal Tank Corps School are:—

- (a) To train officers and non-commissioned officers to act as instructors in drill and tactical handling of armoured cars.
- (b) To train officers and non-commissioned officers and drivers to act as instructors in driving and maintenance of armoured cars and tenders, and to train selected privates as drivers.

The duration of the tactical course is six weeks and of the driving and maintenance course three months.

Army School of Education. The objects of the Army School of Education are:—

- (a) The study of suitable methods of adult education.
- (b) The instruction of officers and non-commissioned officers in the principles laid down for the education of serving soldiers.

Every officer before promotion to captain must have obtained a satisfactory certificate at an Army School of Education. An officer or a non-commissioned officer who has completed a satisfactory course at the school is expected to be competent to supervise and carry on educational training in his unit.

The duration of the course for British officers and non-commissioned officers is two months. For Indian students it varies according to their educational standard on arrival at the school.

The object of the Army School of Cookery is to ensure adequate and uniform training of all ranks who are required to cook for or to supervise the cooking arrangements of
Army School of Cookery. British units in India. It also gives instruction in the best and most economical uses of the ration, with a view to promoting physical efficiency and endurance in the soldier.

The objects of the Army Veterinary
Army Veterinary School. Schools are:—

- (a) To provide courses of instruction for officers, warrant and non-commissioned officers and men of the British and Indian services in veterinary first aid and veterinary hygiene.
- (b) To investigate questions affecting the health and efficiency of military animals.

The purpose of the Indian Army Service Corps Training Centre is to train junior officers and non-commissioned officers in Indian
Indian Army Service Corps Training Centre. Army Service Corps duties. The students may be either junior officers and non-commissioned officers already employed in the Indian Army Service Corps or candidates for permanent appointment to the Corps.

The normal length of the course is eight months, *i.e.*, four months training in supply duties, and four months training in transport duties.

Part III
The Royal Air Force



Chapter XXII

The Royal Air Force in India

IT was in 1909 that M. Bleriot, by flying across the English Channel, awakened in England a new interest in aviation: and in 1910 the Commander-in-Chief in India received the first official application from an officer of the Indian Army for employment as an airman. The request was not granted, and, for four years more, flying in India remained in the hands of private enterprise.

The origin of flying in India.

In 1912 an officer of the Royal Artillery attended army manœuvres at Rawalpindi with an early type of Farman biplane and a French pilot. Both the pilot and the machine had been imported into India at the officer's private expense. The few flights that were made—they were the first flights made in India—ended in disaster to the aeroplane: but they bore fruit in directing serious attention to the military potentialities of the new arm. Within a short time, it was decided to form an Indian Flying School. Accommodation was found in the barracks of the deserted cantonment of Sitapur. The staff was provided by officers of the Indian Army, who, having learnt to fly at their own expense while on leave in England, had afterwards completed a course with the Royal Flying Corps at Farnborough. Mechanics and aeronautical material were provided from England. The organization of the new school had so far progressed by 1914, that it was proposed to commence the first course of instruction at Sitapur in September of that year.

Formation of a Flying School in India.

The outbreak of the Great War, however, intervened. It was not possible at that time to foresee either the long duration of the war, or the enormous demand for trained aviators that it would entail. A correct anticipation would probably have led to the continuance of the school; but, on the outbreak of hostilities, the

Developments of the Great War.

immediate necessity of employing the services of every available pilot obscured every other consideration, and the flying school at Sitapur was broken up. Its staff and aircraft equipment were devoted to active service in the field.

This Indian flying unit, which may be regarded as the embryo of the Royal Air Force in India, first saw active service with the Indian Expeditionary Force despatched to Egypt. Here it performed valuable service in reconnaissances connected with the Turkish attack on the Suez Canal. After the failure of the attack, the unit was relieved by a squadron of the Royal Flying Corps, and its personnel was released for service in Mesopotamia.

1914.—The Indian Flying Corps in Egypt.

The nucleus of the air force required for the Mesopotamia Expeditionary Force, consisted of an air contingent provided by the Commonwealth of Australia. This was supplemented partly by trained men from India, and partly by the Indian Army air-men released from Egypt. The Imperial Government undertook to provide aircraft and aviation stores. The composite body thus formed did excellent work in Mesopotamia, but suffered the loss of a great part of its stores, and some of its personnel, in the retreat to Kut and in the siege.

Mesopotamia.

By the middle of 1915 insistent calls for more air squadrons came from every fighting front. It became evident that, in meeting these demands, the best results would be achieved if the air organization for the war were centralized in, and controlled by, one authority. The rapid technical developments, made month by month on the European fronts, were sufficient in themselves to justify a policy of concentration in the hands of the Imperial Government. The winter of 1915 saw the demise of the Indian Flying Corps as a separate body.

1915.—End of the Indian Flying Corps.

In December 1915, the first detachment of the Royal Flying Corps arrived in India. It consisted of No. 31 Squadron and the nucleus of an Aircraft Park—a unit designed for the storage and supply of technical equipment for the squadron. The whole formation was first located at Nowshera, and subsequently at Risalpur, which latter place is still a first class air station for the Royal Air Force in India.

The Royal Flying Corps in India.

The period from 1916—1918 was one of intensive training. No large air operations were undertaken, but from time to time flights were detached for operations on the North-West Frontier. The experience thus gained led to a decision to add to the strength of the air force in India and in 1918 a second squadron was formed. The total strength of the Air Force in India was now 80 officers and 600 men.

1916—1918.

In 1919 four more air squadrons were added, and two single-seater squadrons were added in 1920. The Air Force was then a body of considerable strength. It consisted of 8 squadrons, two for distant reconnaissance and bombardment, four essentially equipped for co-operation with troops, and two scout or fighting squadrons. The distribution of the force ranged from Bangalore to Peshawar and Quetta; and its organization had been carefully framed on up-to-date lines, the result of expert advice derived from the Air Force authorities in the United Kingdom.

1919.

Almost immediately afterwards, however, the new organization had to share the effects of the post-war financial stringency. Both the new scout squadrons were dispensed with in 1921, one being transferred to Iraq and the other disbanded. In other respects also the air service was affected by the financial difficulties of Government, and in 1922 the state of the Air Force in India formed the subject of a special inquiry, conducted by a distinguished officer of the Royal Air Force, who visited India on his way to assume command of His Majesty's forces in Iraq. The result was a further reform of the Royal Air Force in India. The existing number of squadrons, namely, six, was not increased, but, by adopting certain economies of organization, sufficient financial margin was obtained to render possible the attainment of a much higher standard of efficiency.

1921.

Reorganization of 1922.

Lord Inchcape's Retrenchment Committee of 1922-23 did not recommend any reduction of the Royal Air Force in India as thus reconstituted. The value of the Air Force, as part of the defence services of India, was beyond question, and it was obviously undesirable to disturb a reorganization, recently introduced under first rate technical advice, in devising which the dictates of economy had been carefully studied.

Immunity from re-trenchment.

The Royal Air Force in India has been from the beginning, and still is, controlled by the Commander-in-Chief in India as

The present organization and system of administration of the Royal Air Force in India.

Control by the Commander-in-Chief.

part of the defence services of the Indian Empire. The Air Force budget, as shown in an earlier chapter of this book, is incorporated in the army estimates. The Commander of the Air Force, the Air Officer Commanding in India, is an Air Vice Marshal, whose rank corresponds to that of a Major-General in the Army. The head-

Royal Air Force headquarters.

quarters of the Air Force is closely associated with Army Headquarters, and is located with the latter at the seat of the Government of India. The Air Officer Commanding has a headquarters staff, constituted in three branches, namely, air staff, personnel, and technical and stores. The system of staff organization is similar to the staff system obtaining in the army. Broadly speaking, the duties assigned to the three divisions mentioned are those which are performed by the General Staff Branch, the Adjutant-General's and Military Secretary's branches, and the Quartermaster-General's branch, respectively, of Army Headquarters.

Subordinate formations.

The formations subordinate to Royal Air Force Headquarters are:—

- (1) The Wing Commands, which in their turn, comprise the squadrons of aeroplanes.
- (2) The Aircraft Depot.
- (3) The Aircraft Park.

There are three Wing Commands in India, namely at Peshawar, Risalpur and Quetta. The Wing Commander is an officer with

The Wing Commands.

air force rank corresponding to the rank of Lieutenant-Colonel in the Army. He is equipped with a staff organized on the same system as the headquarters staff of the Air Force. The Wing headquarters establishment consists approximately of seven officers and forty other ranks.

Of the six squadrons, five are extended along the North-West Frontier from Quetta to Risalpur and one is stationed at Ambala.

The squadrons.

The squadron is the primary air force unit and it consists, normally, of a headquarters and three flights of aeroplanes. A flight can be detached temporarily but not permanently from its squadron, as repair facilities, workshops, and stores cannot economically be organized on anything

lower than a squadron basis. The squadron headquarters comprises the officers and other ranks required for the command and administration of the squadron as a whole: it includes the workshop and repair units, the armouries, and equipment stores of the squadron. The number of aeroplanes in a squadron varies with the type of aeroplane of which the squadron is composed: but speaking generally all squadrons on a peace basis have twelve aeroplanes, *i.e.*, four in each of the three flights.

Of the six squadrons two are equipped with DeHavilland 9 A aeroplanes and are allotted to distant reconnaissance and bombardment duties: the other four, which are allotted to army co-operation duties, have Bristol fighter aeroplanes.

The establishment of officers in a squadron consists of six officers in the headquarters, and fifteen officers allotted to flying duties. This allows a reserve of one officer for each of the operative flights.

Typical squadron establishment.

The Aircraft Depôt may conveniently be described as the wholesale store and provision department of the Royal Air Force.

Technical stores from the United Kingdom are received, and, in the first instance, held, in the Aircraft Depôt. It is also the main workshop and repair shop of the Force, where all engine repairs, mechanical transport repairs and aircraft repairs of any magnitude are carried out. The depôt is located at Karachi, the chief reason for selecting this place being firstly that the climate of Karachi permits of European artificers working efficiently for the greater part of the year, and, secondly, it is contemplated that the projected Cairo, Baghdad, India air-route will enter India at Karachi. If this anticipation is realized, it will obviously be convenient to have in existence there a large Air Force maintenance establishment.

Relatively to the Aircraft Depôt, the Aircraft Park may be described as a central retail establishment, intermediate between the squadrons and the Air Craft Depôt. It receives stores from the depôt and distributes

The Aircraft Park.

them to the squadron. The stocks held in the park are, however, usually limited to items necessary at short notice for operations, and the quantities held are kept as low as distance from the depôt and local conditions will admit. In war the Aircraft Park is intended to be a mobile formation. In peace, the Aircraft Park is located at Lahore. New aeroplanes, received from the United Kingdom, are erected there, but no major repairs are undertaken.

The duties of the special supply organization above described are confined to the provision of technical equipment and stores:

Non-technical supplies. non-technical supplies such as rations, petrol, other oils and clothing are provided for the Royal Air Force by the supply services of the Army.

The personnel of the Royal Air Force in India consist of officers, non-commissioned officers and airmen of the Royal Air Force of the United Kingdom, and Indian artificers and mechanics belonging to the

Composition of establishments. Indian technical section. The officers are employed on administrative, flying and technical duties: but all are required to be capable of flying an aeroplane. A proposal is now under consideration to employ non-commissioned officers as pilots: but at present non-commissioned officers and airmen are employed solely on technical work. The only flying personnel who are not officers are aerial gunners and a certain number of wireless operators.

The non-commissioned officers and airmen are employed both with squadrons and at the Aircraft Depôt and Park. The personnel of the Indian technical section are employed entirely at the Depôt and Park on technical trades, and consist of carpenters, fitters, fabric workers, instrument repairers, machinists, etc.

The total establishment consists of 218 officers, 1757 British non-commissioned officers and airmen and 138 Indians.

In India, as in the United Kingdom, the air force has a medical service of its own. Flying must still be regarded as an abnormal pursuit for the human being. It is carried out under conditions which differ widely from those on the ground. With the growth

The Service.	Air	Medical
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of aeronautics, therefore, it was found necessary to create a separate department of medical science whose functions, broadly stated, are to study the effects of flying upon the human constitution, both mental and physical, to study also the effects of different forms of illness and physical disability upon flying efficiency and to apply in practical form the results ascertained. The essential object in view is to save life by ensuring, so far as possible, that those who fly are physically and psychologically fit to do so. The air service in India consists of eleven medical officers and twenty-one medical other ranks. Amongst other things, they are required to attend ordinary cases of brief illness, known as '48-hours cases'. Otherwise, cases of actual illness or injury in the personnel of the air force are treated in the hospitals of the army.

Co-operation between aeroplanes and ground troops is necessarily dependent upon the existence of rapid and reliable means of communication between the two.

Means of communication.

The subject has already been referred to in the chapter dealing with the signal service.

All aeroplanes carrying out artillery observation are equipped with wireless telegraphy. The artillery unit, with which they are co-operating, has a receiving set manned by Royal Air Force personnel. The answering communication, from the ground to the air, is effected by means of strips of white material, placed upon the ground in conventional patterns laid down in a fixed code. Communications from the air with infantry and tanks is normally carried out by means of radio-telephony.

Other means of communication are the Popham panel, the semaphore, and flares of fire. Written messages can of course be dropped by an aeroplane, and in case of emergency messages can be picked up by a grapnel slung from the aeroplane. It is also possible to supply troops with food and ammunition by dropping them from aeroplanes.

The principal tasks required of the air force in war are to bombard the enemy's camps and bases: to harass the enemy's troops by bombing and machine-gun fire and, if possible, to divert them from their objective: to observe and make photographic records of hostile terrain: and to obtain by reconnaissance, and communicate continuously to the troops on the ground, information regarding the enemy's dispositions and movements. If the enemy engaged has an air force, the primary task is, of course, to counter-act its activities and if possible to destroy it.

The potentialities of the Air Force.

The assistance which ground troops derive from the air force is of the greatest possible value: and, in particular, troops that fought in the Great War have come to reckon upon the additional protection which they receive from the air arm. The pilot, from his coign of vantage in the air, reports to the army below concentrations of the enemy's forces, and the direction from which an attack may be expected. He observes the results of artillery fire, and, by communicating messages to the batteries with which he is co-operating, enables them to select their target and correct their aim. It may safely be said, that, if the air force performed nothing more than reconnaissance, it would still add enormously to the defensive and offensive powers of the troops on the ground.

The value of the air force has been conspicuously demonstrated in operations on the frontier of India where action from the air is able to overcome, in a special degree, well known and formidable difficulties of terrain. The rapidity with which aeroplanes can carry out an attack constitutes another military advantage of great importance. It is held that the extensive use of the air arm, where this is practicable, is also economical, as the force does not require the maintenance of the same elaborate land lines of communication as are necessary for ground troops. It has indeed been claimed that the air force can be used with success as a primary and independent weapon, in whole or partial substitution for ground troops. But the truth of this proposition has not yet been fully tested, and in India the Royal Air Force is at present employed as an auxiliary to the army.

Part IV
Military Expenditure and
Finance



Chapter XXIII

The expenditure and finance of the army and air force services in India and the system of financial control

THE expenditure of the army and air force services in India in 1913-14, inclusive of outlay on military works, and after deduction of connected receipts, amounted to Rs. 29 $\frac{1}{4}$ crores.

The level of military expenditure in 1913 and 1923.

In the budget for 1922-23, the figure had risen to Rs. 66 $\frac{1}{2}$ crores. Both figures included sterling expenditure converted into rupees at 16 pence the rupee.

The figure of Rs. 66 $\frac{1}{2}$ crores was not, however, a true measure of the actual recurring cost of the army and air force services as then constituted. The estimates of the year 1922-23 were affected by a number of considerable variations from the normal standard of expenditure. In the first place, they took into account a non-recurring credit of about Rs. 3 $\frac{1}{2}$ crores which was expected to accrue in the year from certain fortuitious circumstances. The strength of the army was under establishment; purchases of supplies were below normal, as there were large war accumulations still remaining of provisions, clothing and other stores; and the estimates also assumed large non-recurring receipts from sales of surplus war stores and other sources. On the other hand, the budget allowed for special expenditure of about Rs. 2 $\frac{1}{2}$ crores on operations in Waziristan, the demobilization of surplus officers, and other items of a similar kind. After eliminating these special credits and charges, the level of net annual expenditure of the army and air force services in India in 1922-23 stood at about Rs. 67 $\frac{1}{2}$ crores.

No addition to the authorised peace establishment of the fighting services had been made in the interval. On the contrary, the strength of British troops in the fighting services had been reduced by about 7,500 men, and of Indian troops by about 10,000 men. The large increase in expenditure was chiefly due to economic causes which were the direct outcome of

Causes of the rise in expenditure, post-war.

war, namely, the general rise in prices, the consequent enhancement of the rates of pay granted to all ranks, and the adoption of a higher standard of comfort for the soldier. The annual cost of an officer holding the King's Commission has risen from about Rs. 7,000 to about Rs. 11,000 in the case of the British Services and from about Rs. 9,000 to about Rs. 14,000 in the case of the Indian Services; of a British soldier from about 1,000 to about 2,500; of an Indian soldier from about Rs. 300 to Rs. 650; and of the lowest class of follower from about Rs. 100 to about Rs. 250. So long as the army is maintained on a voluntary system, the pay of the soldier—both British and Indian—must be assessed at market rates. The increase in the cost of the officer is made up mostly of enhancement of rates of pay and allowances and of pensions. The emoluments of the British Service officer, who normally serves in India for a limited tour must necessarily be assessed with reference to what he receives in England, in cash or in concessions in kind, under the terms of the Royal Warrant; while the emoluments of the Indian Service officer have to be so fixed as to give him an advantage over the British Service officer in India, in recognition of the fact that he undertakes continuous Indian service. Actually, owing to the fall in exchange which has taken place since 1919, when the Indian rates of pay of officers were last revised, the rupee emoluments of British Service officers in India are now in some cases less than his sterling emoluments converted into rupees at the current rate of exchange; and this circumstance has constituted a source of grievance to the officers, which will have to be carefully weighed when the pay of the army is further revised in July 1924 in pursuance of the proviso laid down in 1919. The emoluments of the British soldier in India also, including concessions in kind, have to be determined with reference to what he receives in England; and the home rates of pay and allowances have been largely increased in recent years. In the case of the Indian soldier, pay and pension have been increased—though not to the same extent as in the case of the British soldier—and in addition the State has assumed the liability to feed, house, clothe, equip and mount the Indian soldier and to provide him with adequate medical attendance. As has been explained in previous chapters, the assumption of this liability is a departure of conspicuous importance from pre-war arrangements.

Other causes which have contributed to the rise in expenditure are the development of the staff and administrative services, increase in non-effective charges in consequence of war casualties,

larger capital outlay on the provision of armament and accommodation, and the formation of the Auxiliary and Territorial Forces. The development of the staff and administrative services was rendered necessary by a variety of causes. Experience gained in the Great War had brought out forcibly the evil of depending too much on improvisation after the outbreak of hostilities, and the desirability of maintaining self-contained and properly constituted cadres in peace which could be readily expanded on mobilization. The adoption of a higher standard of training for the soldier and the acceptance of new liabilities in regard to the Indian soldier had also increased the volume of staff and administrative duties. Further, certain entirely new services had been created, such as the air force and mechanical transport, which India did not possess before the War but which are necessary adjuncts to a modern army.

The non-effective charges have risen from about Rs. 5 crores in 1913-14 to about Rs. 9 crores in the budget for 1922-23; and while a part of the increase is due to an enhancement of the rates of pensions of British and Indian personnel, and to an improvement of the disability and family pensions of Indian troops, the bulk represents charges arising out of casualties in Indian personnel and their British officers during the Great War, the war against Afghanistan and the frontier operations of recent years. The charges connected with the war casualties are being met from Indian revenues in accordance with financial adjustments made to liquidate India's contribution towards the expenses of the Great War.

The increase in capital expenditure has been devoted to equipping India's army according to modern standards of armament, etc., and to providing suitable accommodation, including hospitals, for both British and Indian troops. Barracks had deteriorated during the war, and armament had become obsolete.

The cost of the Auxiliary and Territorial Forces exceeds the cost of the pre-war volunteer force by about a crore of rupees.

The Government of India had recognised for some time prior to 1923 that, in the financial situation following upon the Great War and its after-math, it was impossible for them to continue an annual allotment of Rs. 67½ crores for the service of their army and air force. Various measures of retrenchment had engaged the consideration of the military authorities, and some of these had

Proposals for re-trenchment, 1922-23.

actually been introduced by the end of 1921-22. In the beginning of 1922-23, the establishment of officers and clerks at Army Headquarters was examined by a committee, presided over by the Honourable Mr. Charles Innes, a member of the Executive Council of the Governor General, and including as one of its members General Sir Havelock Hudson, who had a short time before been Adjutant General in India. Later in the year, another committee presided over by Lieutenant-General Sir Walter Braithwaite, General Officer Commanding-in-Chief the Western Command, examined the system of administration of the Quartermaster General's services in India. Finally, the expenditure of the military services as a whole was reviewed by the Retrenchment Committee presided over by Lord Inchcape, with results which are now generally known but which it is desirable to place on record here.

The reductions in the annual expenditure of the army and air force recommended by the Inchcape committee fall broadly

The recommendations of Lord Inchcape's Retrenchment Committee. into two main classes: (a) automatic savings from fall in prices or other causes, and savings to be obtained by spreading the capital expenditure on buildings over a larger number of years, and (b) savings to be obtained by measures of real retrenchment. The relief to be obtained from the first of these sources was calculated at about Rs. 3 crores a year. The relief from the second source was estimated by the committee at about Rs. 5½ crores a year. The principal measures of retrenchment recommended by the committee were as follows:—

(1) Reduction in strength of fighting troops:—

Annual saving
in lakhs of rupees.

- | | |
|--|-----|
| (a) Reduction of peace establishment of British other ranks in British infantry battalions from 1,012 to 884, involving a total reduction of 5,760 British other ranks | 144 |
| (b) Reduction of 3 British cavalry regiments | 74 |
| (c) Reduction of 10 per cent. in artillery | 43 |
| (d) Reduction in peace establishment of Indian ranks in active Indian infantry battalions, other than Gurkhas, to 766, in Indian infantry | |

THE EVOLUTION OF THE ARMY IN INDIA

Annual saving
in lakhs of rupees.

training battalions to 600, and in Indian pioneer battalions to 722, involving a total reduction of 6,643 Indian ranks. Annual saving estimated at Rs. 42 lakhs, from which should be deducted Rs. 25 lakhs for expenditure on additional strength of reservists	17	278
(2) Reduction of staff at Army Headquarters; in Command, District and Brigade offices and of expenditure on embarkation and railway transport staff	...	13 $\frac{1}{2}$
(3) Reduction of expenditure on animal and mechanical transport; and on railway charges	...	70 $\frac{3}{4}$
(4) Reduction of expenditure on educational and instructional establishments, and on army education	...	10 $\frac{1}{2}$
(5) Reduction of working expenses of hospitals	...	53
(6) Reduction of expenditure on supply services	...	41
(7) Reduction of expenditure on veterinary services	...	4
(8) Reduction of expenditure on remount depôts and animal breeding operations	...	20
(9) Reduction in messing allowance of British troops	...	37
(10) Reduction in clothing allowances of British and Indian troops	...	23
(11) Reduction in military works establishments	...	10
(12) Other items	...	6 $\frac{1}{4}$
		567

The reductions recommended by the committee under the various items enumerated above have been fully secured except in the case of item (1). As regards this item, the actual reductions made in the peace establishment of fighting troops are as follows: the peace establishment of British other ranks in British infantry

battalions has been reduced to 882; two British cavalry regiments only have been reduced, with a resultant saving in expenditure of about Rs. 50 lakhs a year; a reduction of 23 British officers, 993 British other ranks, 835 Indian ranks and 555 followers has been made in Royal Horse and Field Artillery units, giving approximately the reduction in expenditure recommended by the committee; a total reduction of 5,632 Indian ranks only has been made in the peace establishment of active Indian infantry and pioneer battalions, the resultant saving in expenditure, after allowing for the cost of additional reservists, amounting to about Rs. 10 lakhs a year.

The saving in annual expenditure from specific measures of retrenchment recommended by the committee, and accepted by Government, will amount to about Rs. 538 lakhs; and after allowing for the saving of Rs. 3 crores from automatic and other causes mentioned above, the annual cost of the army and air force services, exclusive of expenditure on special services, *e.g.*, frontier operations, demobilization of troops, etc., will be reduced to about Rs. 59 crores.

The Retrenchment Committee also recommended that a further reduction should be made, by consumption or sale, in the stocks of stores of various classes held by the army, and they calculated that a credit of Rs. $2\frac{1}{4}$ lakhs would be available from this source in 1923-24. The committee's recommendations have been accepted and given effect; and it is expected to secure from this source a larger credit in 1923-24 than the figure mentioned by the committee. The item does not, however, affect the recurring cost of the army and air force.

For a considerable number of years, it has been recognised that efficient financial administration of the military services

d demands the employment of machinery of a special kind. The reasons are not far to seek. The army is one of the largest spending departments of the Central Government.

Other aspects of Army finance. The system of control.

Its expenditure, though of a primary and obligatory character, is "unproductive," and is consequently regarded by public opinion as requiring, in peace time at any rate, a specially vigilant scrutiny and control. Moreover, the organization of the army is, of necessity, exceedingly complex: and control has to be exercised not merely over expenditure of cash but also over consumption of a wide range of stores and commodities. It will be clear, therefore, that methods of financial administration, which may be sufficient

in the case of many categories of civil expenditure, do not provide adequately for the effective control of military expenditure. The arrangements at present in force, which in their origin were adopted on the recommendation of Lord Kitchener, and which have since been expanded and strengthened as a result of recommendations made by the Esher Committee, will now be described. It will be seen that they are based upon a close association of the financial and administrative authorities, and, so far as the interior dispositions of the financial department is concerned, upon a close union of the financial and the accounting machinery.

An officer of the Finance Department, with the status of a joint Secretary to the Government of India, is located at Army Headquarters in charge of an outpost of the Finance Department Secretariat, known as the **Military Finance branch**. This officer deals with the finance of both the army and the air force. This officer is styled the Financial Adviser, Military Finance, and he has a staff of five Deputies, one of whom is also Controller of Air Force accounts, and six assistants. The Financial Adviser acts in a dual capacity. He represents the Finance Department at Army Headquarters, and is also expert adviser to the Commander-in-Chief and his staff officers in all matters of military finance and expenditure. His main functions are to prevent irregularities in expenditure and to ensure that financial principles are duly observed: and on the other hand to assist the Commander-in-Chief and his staff in the financial administration of the army services and in promoting economy in military expenditure, and to prepare for Army Headquarters, and the Army Department, budget and other estimates. It is his duty to scrutinise, with reference to financial principles and in the interests of public economy, all proposals involving military expenditure; to advise whether they should be accepted; and to ensure that the sanction of Government or of the Secretary of State, as the case may be, is obtained when such sanction is necessary under rules. He is a member of the Military Council, and is, amongst other things, to use the words of the Esher Committee, a colleague of the military heads of branches and not a hostile critic. The services of the Financial Adviser and his staff are available to officers of Army Headquarters for direct informal assistance in the preparation of cases. The Financial Adviser has the right of personal access both to the Commander-in-Chief and to the Finance Member of the Executive

Council. All proposals involving expenditure not covered by regulations or by standing orders of competent authority have to be submitted for the scrutiny of the Military Finance Branch; and all indents for the purchase of stores by the headquarters authorities, whether locally or in England, require to be covered by a certificate, obtained from the Military Finance Branch, that funds to meet the expenditure are available without exceeding budget grants.

The Deputy and Assistant Financial advisers, it may be noted, are in practice definitely allotted to the performance of financial duties in one or other of the branches of Army Headquarters.

The annual military budget is prepared under certain main heads which are given in Appendix XIX, each being sub-divided into a number of appropriate detailed heads.

The military budget. The expenditure is recorded in the accounts under the same heads. Each main head is intended to record all expenditure incurred upon a particular class of units and formations, inclusive of pay charges and other cash expenditure as well as the value of stores of various classes (*i.e.*, food, clothing, equipment, etc.) consumed by them, but exclusive of the cost of accommodation.

Each of the three principal staff officers, and certain other officers at Army Headquarters, are responsible for controlling the expenditure of the arms of the service and departments whose administration is entrusted to them. Thus, the Chief of the

Administration of the different grants.

General Staff controls the expenditure of the staff at Army Headquarters, and in Commands, Districts and Brigades, as well as the bulk of the expenditure on educational and instructional establishments and army education; the Adjutant General controls the expenditure of fighting services, of medical services (including working expenses of hospitals), of ecclesiastical establishments, of recruiting staff, hill sanatoria and dépôts, etc., the Quartermaster General controls the expenditure of the Indian Army Service Corps (including animal and mechanical transport, and supply dépôts), arsenals and ordnance dépôts, clothing and boot dépôts (including clothing factories), veterinary and remount services, grass and dairy farms, embarkation and railway transport staff, military works, etc., the Director General of Ordnance controls the expenditure of ordnance factories and of staff employed on ordnance inspection; the Air Officer Commanding controls the expenditure of the Air Force; and the Financial Adviser, Military Finance, controls the expenditure of military accounts offices.

The budget grant for each class of units and formations is in the nature of a block vote, and includes the cost of stores consumed by it. As the stores are mostly drawn from depôts, the stocks in which are replenished by the Quartermaster General or by Army Commanders and subordinate authorities, funds for the purchase of stores are made available through the Stock Account which is debited with the value of stores purchased, and credited with the value of stores consumed by units and formations. A similar arrangement applies to stores obtained by manufacture in manufacturing establishments of the army and air force (*e.g.*, ordnance factories).

In October each year, preliminary budget estimates for the ensuing year are drawn up at Army Headquarters, with the help of such information as may be required from subordinate authorities, showing the grants required under the various heads to meet the ordinary expenditure of the authorised establishments of the army and air force, and any special expenditure arising out of the policy of Government in particular matters. The estimates are prepared either by the Military Finance Branch with the help of the administrative branch concerned, or by the latter in consultation with the former; but in either case they have to be accepted by the head of the administrative branch, before they are formally transmitted to the Financial Adviser. Simultaneously, heads of branches concerned place before the Commander-in-Chief proposals for capital expenditure in the ensuing year on military works and equipment, and for expenditure on any new measures for which administrative and financial sanction have yet to be obtained. The budgets for established charges as accepted by the heads of branches, and the orders of the Commander-in-Chief in regard to capital expenditure and expenditure on new measures, are forwarded to the Financial Adviser who prepares a consolidated compilation of the preliminary budget and submits it for the Commander-in-Chief's consideration. The preliminary budget as approved by the Commander-in-Chief is then submitted by the Financial Adviser to the Finance Member of the Executive Council about the middle of December. Early in January, the Government of India allot provisionally a certain sum of money to meet the net expenditure of the military services (*viz.*, Army, Air Force and Marine) in the ensuing financial year, and the necessary modifications in the preliminary budget are made by the Financial Adviser under the orders of the Commander-in-Chief. A similar procedure is follow-

ed, if the Government of India decide to make any change in the net figure provisionally passed by them.

The Military Finance Branch furnishes periodically to the heads of administrative branches information regarding the progress of expenditure, for the control of which they are responsible, to enable them to take steps to ensure that it does not exceed the budget grant for the purpose. All anticipated excesses and savings are brought to the notice of the Financial Adviser so that he may obtain the orders of the Commander-in-Chief, and, if necessary, of the Finance Member of the Executive Council. Generally speaking, no appropriation of savings, to meet expenditure on a measure for which provision was not made in the budget, is permissible without the concurrence of the Finance Department.

In Commands, the Controller of Military Accounts of the military district in which the headquarters of the Command is located acts as financial adviser to the Army Commander in regard to expenditure which the latter is authorised to sanction; and renders to the Army Commander such assistance as he may require in the preparation of estimates and in controlling expenditure against grants placed at his disposal. The same arrangement is followed in subordinate formations such as districts. The powers of sanctioning expenditure delegated to Army Commanders and subordinate administrative authorities are limited, and are confined in the main to certain specific provisions of the Army Regulations. Certain other powers have also been delegated in recent years in regard to the sanction of expenditure on military works. But the bulk of the expenditure of the army and air force is of a class which, under the present system of organisation, must be controlled from Army Headquarters. It would be impracticable, for example, to give subordinate military authorities the power to vary the rates of pay and allowances of army personnel, their scales of rations, clothing, and equipment, all of which must necessarily be on a uniform basis. The question of increasing the financial powers of Army Commanders and subordinate authorities was re-examined by the Braithwaite Committee, but the only recommendation which that Committee found it desirable to make was that Commands should be given extended functions in regard to the purchase of supplies and transportation charges. In so far as the purchase of supplies is concerned, the recommendation has recently been

carried out and the question of decentralising control over transportation charges is under consideration.

The arrangements for the supply of funds required for military disbursements, and for the maintenance of proper accounts of expenditure, are entrusted to an organisation known as the Military Accounts Department.

The department formerly consisted of military officers obtained from the Indian Army. It is at present composed of a certain number of military officers, survivors of the previous system, and of European and Indian civilians. Present and future recruitment are confined almost entirely to the last mentioned class, *i.e.*, Indians with civilian status.

The department is supervised and controlled by the Finance Department of the Government of India through the Financial Adviser, Military Finance. Its executive head is an officer, attached to Army Headquarters and known as the Military Accountant General, whose principal functions, apart from administering the department, are the organisation of arrangements for the disbursement of pay to officers and men of the army and air force, and for an adequate audit of all charges, and the maintenance of a record of military expenditure and receipts in such form as is required by the administrative and financial authorities.

The system of disbursement, accounts and audit obtaining in the department has been largely changed in recent years, as a result partly of changes in administrative and financial arrangements and partly of certain recommendations made by the Esher Committee. The main features of the new system are the concentration of the issue of funds at a limited number of central stations; the preparation of pay, accounts of units, of priced store accounts of units and store depôts, and of cost accounts of manufacturing establishments, by trained personnel of the military accounts department attached to the units and formations; and the audit of store accounts by a system of local audit which includes a continuous verification of stock.

Separate account offices have been formed for each of the fourteen military districts and for the independent brigade of Allahabad. Each office deals with the accounts of all military units and formations in the district or area, with the exception, firstly, of accounts relating to army ordnance factories and clothing depôts employed partly on manufacture, which are dealt with by a Controller of

army factory accounts and, secondly, of accounts relating to the air force which are dealt with by a Controller of air force accounts. Accountants and clerks of the Military Accounts Department have, as previously stated, been attached to units and formations to prepare on the spot the pay accounts and the priced accounts of stores. The pay accounts are sent to the offices of the Controllers, who issue cheques to the officer commanding the unit in payment of the sums claimed and verified.

As has been explained, the accounts now record the whole expenditure of each class of unit and formation, including the cost of stores consumed but excluding the cost of accommodation. This change was introduced to give effect to the Esher Committee's proposal to institute "block votes"; and it has facilitated, in a remarkable degree, the control of expenditure, particularly in regard to checking undue accumulation of stocks and irregularities connected with the consumption of stores. For this latter purpose, priced accounts of stores are maintained which exhibit the value of stores consumed by the various units, etc., the value of stores lost and the value of stocks held. This, in effect, represents generally the extent to which cost accounting has been introduced in the Army and air force in India. For manufacturing establishments alone a more complete form of cost accounting has been introduced which is designed to ascertain the cost of production of articles manufactured.

Appendices



APPENDIX I

APPENDIX I.

Composition of the Army in India serving in the Three Presidencies immediately prior to the Mutiny of 1857.

EAST INDIA COMPANY'S TROOPS.															
ROYAL TROOPS.	ENGINEERS		ARTILLERY.			NATIVE CAVALRY.			INFANTRY.			Veterans.	Medical Establishment.	Warrant Officers.	TOTAL.
	Engineers and Sappers.	Horse & brigades.	European Foot. 12 battalions.	Native Foot. 6 battalions.	Regular 21 regiments.	Irregular 38 Regiments.	European 9 regiments.	Native regulars 116 regiments.	Native irregulars 46 regiments.						
Cavalry 4 regiments.	115	693	251	119	231	138	284	106	335	2,769	152	163	814	..	6,170
Infantry 22 regiments.	2,57	20,884	110	2,029	4,390	37	60	..	8,103	259	59	..	..	..	38,502
European veterans	..	..	..	..	..	..	..	..	..	..	..	465	..	..	465
Native commissioned Non-commissioned Officer's Rank and File.	..	..	3,043	659	..	3,517	9,532	20,941	..	149,832	35,215	3,613	..	..	226,352
Gun lascars	..	..	..	449	1,658	343	..	..	..	..	..	..	..	..	2,450
Ordnance drivers	..	..	..	..	1,489	848	..	..	..	..	..	..	..	..	2,387
Apothecaries and stewards.	..	..	..	..	..	..	..	..	..	..	..	..	434	..	434
Native doctors	..	..	..	..	..	..	..	..	..	..	..	..	651	..	651
Warrant Officers (Ordnance, etc.).	..	..	..	..	..	..	..	..	..	..	..	..	..	385	385
	2,686	21,577	3,404	3,256	7,768	4,883	9,876	21,047	8,438	152,860	35,426	4,241	1,899	335	277,746
	24,263		3,404		15,907		30,923			196,724		4,241	1,899	385	277,746

APPENDIX II.

Suggested organizations to replace the Presidency Armies.

1879.	1881.	1888.	1890.	1892.
4 Army Corps.	5 Commands.	4 Commands.	7 Forces.	5 Armies and a Command.
(i) Punjab and Frontier .	(i) Punjab } to remain one army but be ad- ministered in two parts.	(i) Punjab Army (including Punjab Frontier Force).	(i) Punjab . . .	(i) Army of the North. Punjab, trans-Indus, Sind Frontier Force.
(ii) Bengal, Assam, N. W. Province and Oudh.	(ii) Bengal	(ii) Hindustan Army . . .	(ii) Hindustan . . .	(ii) Army of the East. N. W. Provinces and Oudh, Bengal and Assam.
(iii) Bombay, Central Pro- vinces, Central India, Rajputana and Sind.	(iii) Bombay Army . . .	(iii) Bombay Army (includ- ing Quetta and Sind).	(iii) Bombay . . .	(iii) Army of the West. Bombay Presidency and such parts of Rajputana and Central India as are now garrisoned by Bombay troops.
(iv) Madras, Hyderabad, Burma and Belgaum.	(iv) Madras Army . . .	(iv) Madras Army (includ- ing Burma),	(iv) Madras . . .	(iv) The Army of the South. Territories garrisoned by the Madras Army.
	(v) Punjab Frontier Force		(v) Burma . . . (vi) Punjab Frontier Force. (vii) Baluchistan.	(v) Burma.

APPENDIX III.

Strength and Distribution of the Army in India in 1887.

	BRITISH.					INDIAN				
	Cavalry.	Artillery.	Royal Engineer Officers.	Infantry.	TOTAL.	Cavalry.	Artillery.	Sappers and Miners.	Infantry.	TOTAL.
Bengal	3,786	7,084	203	34,442	45,515	15,202	1,508	1,438	58,944	77,092
Madras	2,524	1,658	35	11,143	15,360	2,146	271	1,495	28,737	32,649
Bombay	631	2,947	45	8,104	11,727	4,667	452	935	22,490	28,544
Hyderabad Contingent	..	..	..	..	..	2,000	536	..	5,004	7,540
Other local corps	..	..	..	..	..	1,598	..	..	5,669	7,267
TOTAL	6,941	11,689	283	53,689	72,602	25,613	2,767	3,868	120,844	153,092
Grand Total, Army in India						225,694				

APPENDIX IV

APPENDIX IV.
Strength and distribution of the Army in India in 1895.

Command.	INDIAN TROOPS.					APPROXIMATE STRENGTH OF FORCES IN THE COMMAND.			Total Army in India.
	Cavalry Regiments.	Artillery Battalions.	Sapper and Miner Corps.	Infantry Battalions (<i>i.e.</i> regi- ments).		British.	Indian.		
Punjab	15	5	..	37		19,109	42,384		61,493
Bengal	9	2	1	22		23,239	30,819		54,058
Madras	3	..	1 (& 1 Coy.)	32		14,669	30,405		45,074
Bombay	7	2	1	26		15,556	30,055		45,611
TOTAL	34	9	3 (& 1 Coy.)	117		72,573	133,663		206,236

APPENDIX V.

List of Indian Units, showing titles allotted in 1903 and 1922.

Previous Titles.	Titles of 1903.		Titles during 1914-18.		Titles of 1922.	
1st (Duke of York's Own) Bengal Lancers (Skinner's Horse)	1st Duke of York's Own Lancers (Skinner's Horse).	1st Duke of York's Own Lancers (Skinner's Horse).	1st Duke of York's Own Lancers (Skinner's Horse).	1st Duke of York's Own Skinner's Horse.	} 1st Duke of York's Own Skinner's Horse.	
3rd Bengal Cavalry (Skinner's Horse)	3rd Skinner's Horse	3rd Skinner's Horse	3rd Skinner's Horse	3rd Skinner's Horse		
2nd Bengal Lancers	2nd Lancers (Gardner's Horse)	2nd Lancers (Gardner's Horse)	2nd Lancers (Gardner's Horse)	2nd Lancers (Gardner's Horse)	} 2nd Lancers (Gardner's Horse).	
4th Bengal Lancers	4th Lancers	4th Lancers	4th Cavalry	4th Cavalry		
5th Bengal Cavalry	5th Cavalry	5th Cavalry	5th Cavalry	5th Cavalry	} 3rd Cavalry.	
8th Bengal Lancers	8th Lancers	8th Lancers	8th Cavalry	8th Cavalry		
9th Bengal Lancers (Hodson's Horse)	9th Hodson's Horse	9th Hodson's Horse	9th Hodson's Horse	9th Hodson's Horse	} 4th Duke of Cambridge's Own Hodson's Horse.	
10th (Duke of Cambridge's Own) Bengal Lancers (Hodson's Horse).	10th Duke of Cambridge's Own Lancers (Hodson's Horse).	10th Duke of Cambridge's Own Lancers (Hodson's Horse).	10th Duke of Cambridge's Own Lancers (Hodson's Horse).	10th Duke of Cambridge's Own Hodson's Horse.		
11th (Prince of Wales' Own) Bengal Lancers	11th Prince of Wales' Own Lancers	11th Prince of Wales' Own Lancers	11th (King Edward's Own Lancers) (Probyn's Horse).	11th King Edward's Own Probyn's Horse.	} 5th King Edward's Own Probyn's Horse.	
12th Bengal Cavalry	12th Cavalry	12th Cavalry	12th Cavalry	12th Cavalry		
13th (Duke of Connaught's) Bengal Lancers	13th Duke of Connaught's Lancers	13th Duke of Connaught's Lancers	13th Duke of Connaught's Lancers (Watson's Horse).	13th Duke of Connaught's Own Lancers.	} 6th Duke of Connaught's Own Lancers.	
16th Bengal Lancers	16th Cavalry	16th Cavalry	16th Cavalry	16th Cavalry		
3rd Madras Lancers	28th Light Cavalry	28th Light Cavalry	28th Light Cavalry	28th Light Cavalry	} 7th Light Cavalry.	
1st Madras Lancers	26th Light Cavalry	26th Light Cavalry	26th King George's Own Light Cavalry	26th King George's Own Light Cavalry		
4th Lancers (Hyderabad Contingent)	30th Lancers (Gordon's Horse)	30th Lancers (Gordon's Horse)	30th Lancers (Gordon's Horse)	30th Lancers (Gordon's Horse)	} 8th King George's Own Light Cavalry.	
1st Lancers, Hyderabad Contingent	20th Deccan Horse	20th Deccan Horse	20th Deccan Horse	20th Deccan Horse		
2nd Lancers, Hyderabad Contingent	29th Lancers, Deccan Horse	29th Lancers, Deccan Horse	29th Lancers (Deccan Horse)	29th Lancers (Deccan Horse)	} 9th Royal Deccan Horse.	

List of Indian Units, showing titles allotted in 1903 and 1922—contd.

Previous Titles.	Titles of 1903.	Titles during 1914-18.	Titles of 1922.
Queen's Own Corps of Guides	Queen's Own Corps of Guides	Queen Victoria's Own Corps of Guides (Frontier Force) (Lumsden's) Cavalry.	10th Queen Victoria's Own Corps of Guides Cavalry (Frontier Force).
1st Punjab Cavalry (Prince Albert Victor's Own).	21st Prince Albert Victor's Own Cavalry (Frontier Force).	21st Prince Albert Victor's Own Cavalry (Frontier Force) (Daly's Horse).	{ 11th Prince Albert Victor's Own Cavalry (Frontier Force).
3rd Punjab Cavalry	23rd Cavalry (Frontier Force)	23rd Cavalry (Frontier Force)	{ 12th Cavalry (Frontier Force).
2nd Punjab Cavalry	22nd Cavalry (Frontier Force)	22nd Sam Browne's Cavalry (Frontier Force).	
5th Punjab Cavalry	25th Cavalry (Frontier Force)	25th Cavalry (Frontier Force)	
1st (Duke of Connaught's Own) Bombay Lancers.	31st Duke of Connaught's Own Lancers	31st Duke of Connaught's Own Lancers	{ 13th Duke of Connaught's Own Bombay Lancers.
2nd Bombay Lancers	32nd Lancers	32nd Lancers	
5th Bombay Cavalry (Scinde Horse)	35th Scinde Horse	35th Scinde Horse	{ 14th Prince of Wales' Own Scinde Horse.
6th Bombay Cavalry (Jacob's Horse)	36th Jacob's Horse	36th Jacob's Horse	
17th Bengal Lancers	17th Cavalry	17th Cavalry	{ 15th Lancers.
7th Bombay Lancers (Baluch Horse)	37th Lancers (Baluch Horse).	37th Lancers (Baluch Horse)	
2nd Madras Lancers	27th Light Cavalry	27th Light Cavalry	16th Light Cavalry.
3rd (Queen's Own) Bombay Light Cavalry	33rd Queen's Own Light Cavalry	33rd Queen Victoria's Own Light Cavalry	
4th (Prince Albert Victor's Own) Bombay Cavalry (Poona Horse).	34th Prince Albert Victor's Own Poona Horse.	34th Prince Albert Victor's Own Poona Horse.	{ 17th Queen Victoria's Own Poona Horse.
6th (Prince of Wales') Bengal Cavalry	6th Prince of Wales' Cavalry	6th King Edward's Own Cavalry	{ 18th King Edward's Own Cavalry.
7th Bengal Lancers	7th Lancers	7th Hariana Lancers	
15th Bengal Lancers	18th Tiwana Lancers	18th King George's Own Lancers	{ 19th King George's Own Lancers.
19th Bengal Lancers (Fane's Horse)	19th Lancers (Fane's Horse)	19th Lancers (Fane's Horse)	

List of Sappers and Miner Corps, showing titles allotted in 1903 and 1923.

Previous Titles.	Titles of 1903.		Titles during 1914-18.		Titles of 1923.	
14th Bengal Lancers (Murray's Jat Horse) .	14th Murray's Jat Lancers .	14th Murray's Jat Lancers .	14th Murray's Jat Lancers .	14th Murray's Jat Lancers .	20th Lancers.	
15th (Cureton's Mulkani) Bengal Lancers .	15th Lancers (Cureton's Moolkanis) .	15th Lancers (Cureton's Moolkanis) .	15th Lancers (Cureton's Moolkanis) .	15th Lancers (Cureton's Moolkanis) .	20th Lancers.	
1st Central India Horse .	38th Central India Horse .	38th Central India Horse .	38th King George's Own Central India Horse.	38th King George's Own Central India Horse.	21st King George's Own Central India Horse.	
2nd Central India Horse .	39th Central India Horse .	39th Central India Horse .	39th King George's Own Central India Horse.	39th King George's Own Central India Horse.	21st King George's Own Central India Horse.	
....	....	....	40th Cavalry Regiment .	40th Cavalry Regiment .	....	
....	....	....	41st Cavalry Regiment .	41st Cavalry Regiment .	....	
....	....	....	42nd Cavalry Regiment .	42nd Cavalry Regiment .	....	
....	....	....	43rd Cavalry Regiment .	43rd Cavalry Regiment .	....	
....	....	....	44th Cavalry Regiment .	44th Cavalry Regiment .	....	
....	....	....	45th Cavalry Regiment .	45th Cavalry Regiment .	....	

Previous Titles.	Titles of 1903.		Titles during 1914-18.		Titles of 1923.	
Bengal Sappers and Miners .	1st Sappers and Miners .	1st Sappers and Miners .	1st King George's Own Sappers and Miners.	1st King George's Own Sappers and Miners.	King George's Own Bengal Sappers and Miners.	
Queen's Own Madras Sappers and Miners .	2nd Queen's Own Sappers and Miners .	2nd Queen's Own Sappers and Miners .	2nd Queen Victoria's Own Sappers and Miners.	2nd Queen Victoria's Own Sappers and Miners.	Queen Victoria's Own Madras Sappers and Miners.	
Bombay Sappers and Miners .	3rd Sappers and Miners .	3rd Sappers and Miners .	3rd Sappers and Miners .	3rd Sappers and Miners .	Royal Bombay Sappers and Miners.	
....	....	....	....	....	Burma Sappers and Miners.	

List of Indian Pack Artillery Batteries, showing titles allotted in 1903 and 1922.

Previous Titles.	Titles of 1903.	Titles during 1914-18.	Titles of 1922.
Kohat Mountain Battery .	21st Kohat Mountain Battery (Frontier Force).	21st Kohat Mountain Battery (Frontier Force).	101st Royal (Kohat) Pack Battery (Frontier Force).
Derajat Mountain Battery .	22nd Derajat Mountain Battery (Frontier Force).	22nd Derajat Mountain Battery (Frontier Force).	102nd (Derajat) Pack Battery (Frontier Force).
Peshawar Mountain Battery .	23rd Peshawar Mountain Battery (Frontier Force).	23rd Peshawar Mountain Battery (Frontier Force).	103rd (Peshawar) Pack Battery (Frontier Force).
Hazara Mountain Battery .	24th Hazara Mountain Battery (Frontier Force).	24th Hazara Mountain Battery (Frontier Force).	104th (Hazara) Pack Battery (Frontier Force).
Quetta Mountain Battery .	25th Mountain Battery .	25th Mountain Battery .	105th (Bombay) Pack Battery.
Jullunder Mountain Battery .	26th Jacob's Mountain Battery .	26th Jacob's Mountain Battery .	106th (Jacob's) Pack Battery.
Gujrat Mountain Battery .	27th Mountain Battery .	27th Mountain Battery .	107th (Bengal) Pack Battery.
Lahore Mountain Battery .	28th Mountain Battery .	28th Mountain Battery .	108th (Lahore) Pack Battery.
Murree Mountain Battery .	29th Mountain Battery .	29th Mountain Battery .	109th (Murree) Pack Battery.
Abbottabad Mountain Battery .	30th Mountain Battery .	30th Mountain Battery .	110th (Abbottabad) Pack Battery.
....	31st Mountain Battery (1907) .	31st Mountain Battery .	111th (Dehra Dun) Pack Battery.
....	32nd Mountain Battery (1907) .	32nd Mountain Battery .	112th (Poonch) Pack Battery.
....	....	33rd (Reserve) Mountain Battery .	113th (Dardoni) Pack Battery.
....	....	34th (Reserve) Mountain Battery .	114th (Rajputana) Pack Battery.
....	....	35th (Reserve) Mountain Battery .	115th (Jhelum) Pack Battery.
....	....	36th (Reserve) Mountain Battery .	116th (Zhob) Pack Battery.
....	....	37th (Reserve) Mountain Battery .	117th (Rawalpindi) Pack Battery.
....	....	38th (Reserve) Mountain Battery.	118th (Sohan) Pack Battery.
....	....	39th (Reserve) Mountain Battery .	119th (Maymyo) Pack Battery.
....	....	40th (Reserve) Mountain Battery.	.....

List of Indian Infantry and Pioneer Units, showing titles allotted in 1903 and 1922.

Previous Titles.	Titles of 1903.		Titles during 1914-18.		Titles of 1922.	
....	1st Brahman Infantry	1st Brahmans	1st Battalion, 1st Brahmans	1st Battalion, 1st Punjab Regiment,	....	120th (Ambala) Pack Battery.
....	....	....	2nd Battalion, 1st Brahmans	....	....	121st (Nowshera) Pack Battery.
....	2nd (Queen's Own) Rajput Light Infantry	2nd Queen's Own Rajput Light Infantry	1st Battalion, 2nd Queen Victoria's Own Rajput Light Infantry.	1st Battalion, 7th Rajput Regiment (Queen Victoria's Own Light Infantry).	....	....
....	....	....	2nd Battalion, 2nd Queen Victoria's Own Rajput Light Infantry.	....	....	....
....	....	....	3rd Battalion, 2nd Queen Victoria's Own Rajput Light Infantry.	....	....	....
....	3rd Brahman Infantry	3rd Brahmans	1st Battalion, 3rd Brahmans	....	....	....
....	....	....	2nd Battalion, 3rd Gaur Brahmans	....	....	....
....	4th (Prince Albert Victor's) Rajput Infantry	4th Prince Albert Victor's Rajputs	1st Battalion, 4th Prince Albert Victor's Rajputs.	2nd Battalion, 7th Rajput Regiment (Prince Albert Victor's).	....	....
....	....	....	2nd Battalion, 4th Prince Albert Victor's Rajputs.	....	....	....
....	5th Bengal (Light) Infantry	5th Light Infantry	1st Battalion, 5th Light Infantry	....	....	....
....	....	....	2nd Battalion, 5th Light Infantry	....	....	....

List of Indian Infantry and Pioneer Units, showing titles allotted in 1903 and 1922—contd.

Previous Titles.	Titles of 1903.		Titles during 1914-18.		Titles of 1922.	
6th Jat Light Infantry	6th Jat Light Infantry		1st Battalion, 6th Jat Light Infantry		1st Royal Battalion, 9th Jat Regiment (Light Infantry).	
7th (Duke of Connaught's Own) Rajput Infantry.	7th Duke of Connaught's Own Rajputs		2nd Battalion, 6th Jat Light Infantry		10th Battalion, 9th Jat Regiment.	
.			1st Battalion, 7th Duke of Connaught's Own Rajputs.		3rd Battalion, 7th Rajput Regiment (Duke of Connaught's Own).	
.			2nd Battalion, 7th Duke of Connaught's Own Rajputs.			
8th Rajput Infantry	8th Rajputs		1st Battalion, 8th Rajputs		4th Battalion, 7th Rajput Regiment.	
.			2nd Battalion, 8th Rajputs			
Bhopal Battalion	9th Bhopal Infantry		1st Battalion, 9th Bhopal Infantry		4th Battalion, 16th Punjab Regiment (Bhopal).	
.			2nd Battalion, 9th (Delhi) Infantry			
.			3rd Battalion, 9th Bhopal Infantry			
.			4th Battalion, 9th Bhopal Infantry			
10th Jat Infantry	10th Jats		1st Battalion, 10th Jats		3rd Battalion, 9th Jat Regiment.	
.			2nd Battalion, 10th Jats			
11th Rajput Infantry	11th Rajputs		1st Battalion, 11th Rajputs		5th Battalion, 7th Rajput Regiment.	
.			2nd Battalion, 11th Rajputs			
12th Bengal Pioneers (The Kelat-i-Ghilzie Regiment).	12th Pioneers (The Kelat-i-Ghilzie Regiment).		1st Battalion, 12th Pioneers (The Kelat-i-Ghilzie Regiment).		2nd Battalion, 2nd Bombay Pioneers (Kelat-i-Ghilzie).	
.			2nd Battalion, 12th Pioneers (The Kelat-i-Ghilzie Regiment).			
13th (Shekhawati) Rajput Infantry	13th Rajputs (The Shekhawati Regiment).		13th Rajputs (The Shekhawati Regiment).		10th Battalion, 6th Rajputana Rifles (Shekhawati).	
14th (Ferozepore) Sikh Infantry	14th Ferozepore Sikhs		14th King George's Own Ferozepore Sikhs.		1st Battalion, 11th Sikh Regiment (King George's Own) (Ferozepore Sikhs).	

APPENDIX V—(contd.)

15th (Ludhiana) Sikh Infantry	15th Ludhiana Sikhs	1st Battalion, 15th Ludhiana Sikhs	2nd Battalion, 11th Sikh Regiment (Ludhiana Sikhs).
16th (Lucknow) Rajput Infantry	16th Rajputs (The Lucknow Regiment)	2nd Battalion, 15th Ludhiana Sikhs	10th Battalion, 7th Rajput Regiment (The Lucknow Regiment).
17th Musalman Rajput Infantry (The Loyal Regiment).	17th Infantry (The Loyal Regiment)	1st Battalion, 17th Infantry (The Loyal Regiment).	1st Battalion, 14th Punjab Regiment.
18th Musalman Rajput Infantry	18th Infantry	2nd Battalion, 17th Infantry (The Loyal Regiment).	4th Battalion, 9th Jat Regiment. [Since disbanded.
19th Punjab Infantry	19th Punjabis	1st Battalion, 18th Infantry	1st Battalion, 14th Punjab Regiment.
20th (Duke of Cambridge's Own) Punjab Infantry.	20th Duke of Cambridge's Own Punjabis	2nd Battalion, 18th Infantry	2nd Battalion, 14th Punjab Regiment (Duke of Cambridge's Own) (Brownlow's).
21st Punjab Infantry	21st Punjabis	1st Battalion, 19th Punjabis	10th Battalion, 14th Punjab Regiment.
22nd Punjab Infantry	22nd Punjabis	2nd Battalion, 19th Punjabis	3rd Battalion, 14th Punjab Regiment.
23rd Punjab-Pioneers	23rd Sikh Pioneers	20th Duke of Cambridge's Own Infantry (Brownlow's Punjabis).	1st Battalion, 3rd Sikh Pioneers.
24th Punjab Infantry	24th Punjabis	1st Battalion, 21st Punjabis	10th Battalion, 3rd Sikh Pioneers.
25th Punjab Infantry	25th Punjabis	2nd Battalion, 21st Punjabis	4th Battalion, 14th Punjab Regiment.
26th Punjab Infantry	26th Punjabis	1st Battalion, 22nd Punjabis	1st Battalion, 15th Punjab Regiment.
27th Punjab Infantry	27th Punjabis	2nd Battalion, 22nd Punjabis	2nd Battalion, 15th Punjab Regiment.
		1st Battalion, 23rd Sikh Pioneers	3rd Battalion, 15th Punjab Regiment.
		2nd Battalion, 23rd Sikh Pioneers	
		3rd Battalion, 23rd Sikh Pioneers	
		24th Punjabis	
		1st Battalion, 25th Punjabis	
		2nd Battalion, 25th Punjabis	
		1st Battalion, 26th Punjabis	
		2nd Battalion, 26th Punjabis	
		1st Battalion, 27th Punjabis	

List of Indian Infantry and Pioneer Units, showing titles allotted in 1903 and 1922—contd.

Previous Titles.	Titles of 1903.	Titles during 1914-18.	Titles of 1922.
....	....	2nd Battalion, 27th Punjabis	....
28th Punjab Infantry	28th Punjabis	1st Battalion, 28th Punjabis	4th Battalion, 15th Punjab Regiment.
....	....	2nd Battalion, 28th Punjabis	....
29th Punjab Infantry	29th Punjabis	29th Punjabis	10th Battalion, 15th Punjab Regiment.
30th Punjab Infantry	30th Punjabis	1st Battalion, 30th Punjabis	1st Battalion, 16th Punjab Regiment.
....	....	2nd Battalion, 30th Punjabis	....
....	....	3rd Battalion, 30th Punjabis	....
....	....	4th Battalion, 30th Punjabis	....
31st Punjab Infantry	31st Punjabis	31st Punjabis	2nd Battalion, 16th Punjab Regiment.
32nd Punjab Pioneers	32nd Sikh Pioneers	1st Battalion, 32nd Sikh Pioneers	2nd Battalion, 3rd Sikh Pioneers.
....	....	2nd Battalion, 32nd Sikh Pioneers	....
....	....	3rd Battalion, 32nd Sikh Pioneers	....
33rd Punjab Infantry	33rd Punjabis	1st Battalion, 33rd Punjabis	3rd Battalion, 16th Punjab Regiment.
....	....	2nd Battalion, 33rd Punjabis	....
34th Punjab Pioneers	34th Sikh Pioneers	1st Battalion, 34th Sikh Pioneers	3rd Royal Battalion, 3rd Sikh Pioneers.
....	....	2nd Battalion, 34th Sikh Pioneers	....
....	....	3rd Battalion, 34th Sikh Pioneers	....
35th Sikh Infantry	35th Sikhs	1st Battalion, 35th Sikhs	10th Battalion, 11th Sikh Regiment.
....	....	2nd Battalion, 35th Sikhs	....
36th Sikh Infantry	36th Sikhs	36th Sikhs	4th Battalion, 11th Sikh Regiment.
37th Dogra Infantry	37th Dogras	37th Dogras	1st Battalion, 17th Dogra Regiment (Prince of Wales' Own).

APPENDIX V—(contd.)

38th Dogra Infantry	38th Dogras	38th Dogras	2nd Battalion, 17th Dogra Regiment.
1st Battalion, 39th Garhwal Rifles	1st Battalion, 39th Garhwal Rifles	1st Battalion, 39th Garhwal Rifles	1st Battalion, 18th Royal Garhwal Rifles.
2nd Battalion, 39th Garhwal Rifles	2nd Battalion, 39th Garhwal Rifles	2nd Battalion, 39th Garhwal Rifles	2nd Battalion, 18th Royal Garhwal Rifles.
....	....	3rd Battalion, 39th Garhwal Rifles	3rd Battalion, 18th Royal Garhwal Rifles.
....	....	4th Battalion, 39th Garhwal Rifles	10th Battalion, 18th Royal Garhwal Rifles.
40th Punjab Infantry	40th Pathans	40th Pathans	5th Battalion, 14th Punjab Regiment.
41st Dogra Infantry	41st Dogras	1st Battalion, 41st Dogras	3rd Battalion, 17th Dogra Regiment.
....	....	2nd Battalion, 41st Dogras	10th Battalion, 17th Dogra Regiment.
Deoli Irregular Force	42nd Deoli Regiment	1st Battalion, 42nd Deoli Regiment	....
....	....	2nd Battalion, 42nd Deoli Regiment	....
Erinpura Irregular Force	43rd Erinpura Regiment	1st Battalion, 43rd Erinpura Regiment	....
....	....	2nd Battalion, 43rd Erinpura Regiment	....
Merwara Battalion	44th Merwara Infantry	44th Merwara Infantry	....
45th (Rattray's) Sikh Infantry	45th Rattray's Sikhs	45th Rattray's Sikhs	3rd Battalion, 11th Sikh Regiment (Rattray's Sikhs).
46th Punjab Infantry	46th Punjabis	46th Punjabis	10th Battalion, 16th Punjab Regiment.
47th Sikh Infantry	47th Sikhs	47th Sikhs	5th Battalion, 11th Sikh Regiment (Duke of Connaught's Own).
48th Bengal Pioneers	48th Pioneers	1st Battalion, 48th Pioneers	4th Battalion, 2nd Bombay Pioneers.
....	....	2nd Battalion, 48th Pioneers	....
....	....	49th Bengalis	....
....	....	1st Battalion, 50th Kumaon Rifles	1st Kumaon Rifles.
....	....	2nd Battalion, 50th Kumaon Rifles	2nd Kumaon Rifles. [Since disbanded.
1st Sikh Infantry	51st Sikhs (Frontier Force)	51st Sikhs (Frontier Force)	1st Battalion, 12th Frontier Force Regiment (Prince of Wales' Own) (Sikhs).

List of Indian Infantry and Pioneer Units, showing titles allotted in 1903 and 1922—*contd.*

Previous Titles.	Titles of 1903.	Titles during 1914-18.	Titles of 1922.
2nd (or Hill) Sikh Infantry	52nd Sikhs (Frontier Force)	52nd Sikhs (Frontier Force)	2nd Battalion, 12th Frontier Force Regiment (Sikhs).
3rd Sikh Infantry	53rd Sikhs (Frontier Force)	53rd Sikhs (Frontier Force)	3rd Battalion, 12th Frontier Force Regiment (Sikhs).
4th Sikh Infantry	54th Sikhs (Frontier Force)	1st Battalion, 54th Sikhs (Frontier Force).	4th Battalion, 12th Frontier Force Regiment (Sikhs).
.....	.....	2nd Battalion, 54th Sikhs (Frontier Force).	.....
Queen's Own Corps of Guides	Queen's Own Corps of Guides	Queen Victoria's Own Corps of Guides (Frontier Force) (Lumsden's).	5th Battalion, 12th Frontier Force Regiment (Queen Victoria's Own Corps of Guides).
.....	.....	2nd Battalion, Queen Victoria's Own Corps of Guides (Frontier Force) (Lumsden's).	10th Battalion, 12th Frontier Force Regiment (Queen Victoria's Own Corps of Guides).
.....	.....	3rd Battalion, Queen Victoria's Own Corps of Guides (Frontier Force) (Lumsden's).	.....
1st Punjab Infantry	55th Coke's Rifles (Frontier Force)	1st Battalion, 55th Coke's Rifles (Frontier Force).	1st Battalion, 13th Frontier Force Rifles (Coke's).
.....	.....	2nd Battalion, 55th Coke's Rifles (Frontier Force).	.....
2nd Punjab Infantry	56th Infantry (Frontier Force)	1st Battalion, 56th Punjab Rifles (Frontier Force).	2nd Battalion, 13th Frontier Force Rifles.
.....	.....	2nd Battalion, 56th Punjab Rifles (Frontier Force).	10th Battalion, 13th Frontier Force Rifles.
4th Punjab Infantry	57th Wilde's Rifles (Frontier Force)	57th Wilde's Rifles (Frontier Force)	4th Battalion, 13th Frontier Force Rifles (Wilde's).
5th Punjab Infantry	58th Vaughan's Rifles (Frontier Force)	58th Vaughan's Rifles (Frontier Force)	5th Battalion, 13th Frontier Force Rifles.
6th Punjab Infantry	59th Scinde Rifles (Frontier Force)	59th Scinde Rifles (Frontier Force)	6th Royal Battalion, 13th Frontier Force Rifles (Scinde).

APPENDIX V—(contd.)

1st Madras Pioneers	.	.	.	.	61st Pioneers	.	.	.	.	1st Battalion, 61st King George's Own Pioneers.	1st Battalion, 61st King George's Own Pioneers.	1st Battalion, 1st Madras Pioneers (King George's Own).
....												
2nd Madras Infantry	.	.	.	.	62nd Punjabis	.	.	.	.	62nd Punjabis	.	1st Battalion, 1st Punjab Regiment.
3rd (Palanccottah) Madras Light Infantry	.	.	.	.	63rd Palanccottah Light Infantry	.	.	.	.	1st Battalion, 63rd Palanccottah Light Infantry.	.	....
....												
4th Madras Pioneers	.	.	.	.	64th Pioneers	.	.	.	.	64th Pioneers	.	2nd Battalion, 1st Madras Pioneers.
5th Madras Infantry.	.	.	.	.	65th Carnatic Light Infantry	.	.	.	.	....	....	....
6th Madras Infantry.	.	.	.	.	66th Punjabis	.	.	.	.	1st Battalion, 66th Punjabis	.	2nd Battalion, 1st Punjab Regiment.
....					....					2nd Battalion, 66th Punjabis	.	....
7th Madras Infantry.	.	.	.	.	67th Punjabis	.	.	.	.	1st Battalion, 67th Punjabis	.	1st Battalion, 2nd Punjab Regiment.
....					....					2nd Battalion, 67th Punjabis	.	10th Battalion, 2nd Punjab Regiment.
8th Madras Infantry.	.	.	.	.	69th Punjabis	.	.	.	.	1st Battalion, 69th Punjabis	.	2nd Battalion, 2nd Punjab Regiment.
....					....					2nd Battalion, 69th Punjabis	.	....
....					....					1st Battalion, 70th Burma Rifles	.	1st Battalion, 20th Burma Rifles.
....					....					2nd Battalion, 70th Burma Rifles	.	2nd Battalion, 20th Burma Rifles.
....					....					4th Battalion, 70th Burma Rifles	.	4th Battalion, 20th Burma Rifles (Chin). [Since disbanded.]
....					....					3rd (or 5th) Battalion, 70th Burma Rifles	.	10th Battalion, 20th Burma Rifles.
11th Coorg Infantry	.	.	.	.	71st Coorg Rifles	.	.	.	.	71st Punjabis	.	....
12th Burma Infantry	.	.	.	.	72nd Punjabis	.	.	.	.	1st Battalion, 72nd Punjabis	.	3rd Battalion, 2nd Punjab Regiment.
....					....					2nd Battalion, 72nd Punjabis	.	....
13th Madras Infantry	.	.	.	.	73rd Carnatic Infantry.	.	.	.	.	1st Battalion, 73rd Carnatic Infantry	.	1st Battalion, 3rd Madras Regiment.
....					....					2nd Battalion, 73rd Malabar Infantry	.	....
14th Madras Infantry	.	.	.	.	74th Punjabis	.	.	.	.	74th Punjabis	.	4th Battalion, 2nd Punjab Regiment.

List of Indian Infantry and Pioneer Units, showing titles allotted in 1903 and 1922—contd.

Previous Titles.	Titles of 1903.	Titles during 1914-18.	Titles of 1922.
15th Madras Infantry	75th Carnatic Infantry.	1st Battalion, 75th Carnatic Infantry .	2nd Battalion, 3rd Madras Regiment.
....	....	2nd Battalion, 75th Carnatic Infantry .	....
16th Madras Infantry	76th Punjabis	1st Battalion, 76th Punjabis	3rd Battalion, 1st Punjab Regiment.
....	....	2nd Battalion, 76th Punjabis . . . . .	....
....	77th Moplah Rifles . . . . .	....	....
....	78th Moplah Rifles . . . . .	....	....
19th Madras Infantry	79th Carnatic Infantry.	79th Carnatic Infantry.	3rd Battalion, 3rd Madras Regiment.
20th Madras Infantry	80th Carnatic Infantry.	80th Carnatic Infantry.	[Since disbanded.
21st Madras Pioneers	81st Pioneers	1st Battalion, 81st Pioneers . . . . .	....
....	....	2nd Battalion, 81st Pioneers	10th Battalion, 1st Madras Pioneers.
22nd Madras Infantry	82nd Punjabis	82nd Punjabis . . . . .	....
23rd (Wallejahbad) Madras Light Infantry	83rd Wallejahbad Light Infantry	83rd Wallejahbad Light Infantry	5th Battalion, 1st Punjab Regiment.
....	....	....	4th Battalion, 3rd Madras Regiment (Wallejahbad Light Infantry)
24th Madras Infantry	84th Punjabis	84th Punjabis	[Since disbanded.
....	....	85th Burman Rifles	10th Battalion, 1st Punjab Regiment.
....	....	86th Carnatic Infantry	3rd Battalion, 20th Burma Rifles (Kachin).
26th Madras Infantry	86th Carnatic Infantry.	86th Carnatic Infantry	10th Battalion, 3rd Madras Regiment.
27th Madras Infantry	87th Punjabis	87th Punjabis	5th Battalion, 2nd Punjab Regiment.
28th Madras Infantry	88th Carnatic Infantry.	1st Battalion, 88th Carnatic Infantry .	....
....	....	2nd Battalion, 88th Carnatic Infantry .	....
29th Burma Infantry	89th Punjabis	1st Battalion, 89th Punjabis	1st Battalion, 8th Punjab Regiment.
....	....	2nd Battalion, 89th Punjabis	10th Battalion, 8th Punjab Regiment.

APPENDIX V—(contd.)

30th Burma Infantry	.	.	.	90th Punjabis	.	.	.	1st Battalion, 90th Punjabis	.	2nd Battalion, 8th Punjab Regiment.
....				....				2nd Battalion, 90th Punjabis	.	....
31st Burma Light Infantry	.	.	.	91st Punjabis	.	.	.	1st Battalion, 91st Punjabis (Light Infantry).	.	3rd Battalion, 8th Punjab Regiment.
....				....				2nd Battalion, 91st Punjabis (Light Infantry).	.	....
32nd Burma Infantry	.	.	.	92nd Punjabis	.	.	.	92nd Punjabis	.	4th Battalion, 8th Punjab Regiment (Prince of Wales' Own).
33rd Burma Infantry	.	.	.	93rd Burma Infantry	.	.	.	93rd Burma Infantry	.	5th Battalion, 8th Punjab Regiment (Burma).
1st Infantry, Hyderabad Contingent	.	.	.	94th Russell's Infantry	.	.	.	1st Battalion, 94th Russell's Infantry	.	1st Battalion, 19th Hyderabad Regiment (Russell's).
....				....				2nd Battalion, 94th Russell's Infantry	.	....
2nd Infantry, Hyderabad Contingent	.	.	.	95th Russell's Infantry	.	.	.	1st Battalion, 95th Russell's Infantry	.	10th Battalion, 19th Hyderabad Regiment (Russell's).
....				....				2nd Battalion, 95th Russell's Infantry	.	....
3rd Infantry, Hyderabad Contingent	.	.	.	96th Berar Infantry	.	.	.	1st Battalion, 96th Berar Infantry	.	2nd Battalion, 19th Hyderabad Regiment (Berar).
....				....				2nd Battalion, 96th Infantry	.	....
4th Infantry, Hyderabad Contingent	.	.	.	97th Deccan Infantry	.	.	.	1st Battalion, 97th Deccan Infantry	.	3rd Battalion, 19th Hyderabad Regiment.
....				....				2nd Battalion, 97th Deccan Infantry	.	....
5th Infantry, Hyderabad Contingent	.	.	.	98th Infantry	.	.	.	1st Battalion, 98th Infantry	.	....
....				....				2nd Battalion, 98th Infantry	.	....
6th Infantry, Hyderabad Contingent	.	.	.	99th Deccan Infantry	.	.	.	1st Battalion, 99th Deccan Infantry	.	5th Battalion, 19th Hyderabad Regiment [since disbanded].
....				....				2nd Battalion, 99th Deccan Infantry	.	....
1st Bombay Grenadiers	.	.	.	101st Grenadiers	.	.	.	1st Battalion, The 101st Grenadiers	.	1st Battalion, 4th Bombay Grenadiers.
....				....				2nd Battalion, The 101st Grenadiers	.	....
2nd (Prince of Wales' Own) Bombay Grenadiers.	.	.	.	102nd Prince of Wales' Own Grenadiers	.	.	.	1st Battalion, 102nd King Edward's Own Grenadiers.	.	2nd Battalion, 4th Bombay Grenadiers (King Edward's Own).
....				....				2nd Battalion, 102nd King Edward's Own Grenadiers.	.	....

List of Indian Infantry and Pioneer Units, showing titles allotted in 1903 and 1922—contd.

Previous Titles.	Titles of 1903.		Titles during 1914-18.		Titles of 1922.
3rd Bombay Light Infantry	.	103rd Mahratta Light Infantry	.	1st Battalion, 103rd Mahratta Light Infantry.	1st Battalion, 5th Mahratta Light Infantry.
....				2nd Battalion, 103rd Mahratta Light Infantry.	....
....				3rd Battalion, 103rd (Kolhapur) Mahratta Light Infantry.	....
4th Bombay Rifles	.	104th Wellesley's Rifles	.	104th Wellesley's Rifles	1st Battalion, 6th Rajputana Rifles (Wellesley's).
5th Bombay Light Infantry	.	105th Mahratta Light Infantry	.	105th Mahratta Light Infantry	2nd Battalion, 5th Mahratta Light Infantry.
....		106th Hazara Pioneers (1904)	.	106th Hazara Pioneers	1st Battalion, 4th Hazara Pioneers.
7th Bombay Pioneers	.	107th Pioneers	.	1st Battalion, 107th Pioneers	1st Battalion, 2nd Bombay Pioneers.
....				2nd Battalion, 107th Pioneers	....
8th Bombay Infantry	.	108th Infantry	.	108th Infantry	3rd Battalion, 4th Bombay Grenadiers.
9th Bombay Infantry	.	109th Infantry	.	1st Battalion, 109th Infantry	4th Battalion, 4th Bombay Grenadiers.
....				2nd Battalion, 109th Infantry	....
10th Bombay Light Infantry	.	110th Mahratta Light Infantry	.	110th Mahratta Light Infantry	3rd Battalion, 5th Mahratta Light Infantry.
....				111th Mahars	....
12th Bombay Infantry	.	112th Infantry	.	1st Battalion, 112th Infantry	5th Battalion, 4th Bombay Grenadiers [since disbanded].
....				2nd Battalion, 112th Infantry	....
13th Bombay Infantry	.	113th Infantry	.	1st Battalion, 113th Infantry	10th Battalion, 4th Bombay Grenadiers.
....				2nd Battalion, 113th Infantry	....
14th Bombay Infantry	.	114th Mahrattas	.	114th Mahrattas	10th Battalion, 5th Mahratta Light Infantry.

APPENDIX V—(contd.)

16th Bombay Infantry	116th Mahrattas	1st Battalion, 116th Mahrattas	4th Battalion, 5th Mahratta Light Infantry.
17th Bombay Infantry	117th Mahrattas	2nd Battalion, 116th Mahrattas	5th Royal Battalion, 5th Mahratta Light Infantry.
18th Bombay Infantry	119th Infantry (The Mooltan Regiment)	1st Battalion, 117th Mahrattas	2nd Battalion, 9th Jat Regiment (Mooltan Battalion).
19th Bombay Infantry	120th Rajputana Infantry	2nd Battalion, 117th Mahrattas	2nd Battalion, 6th Rajputana Rifles (Prince of Wales Own).
20th Bombay Infantry	121st Pioneers	1st Battalion, 119th Infantry (The Mooltan Regiment).	10th Battalion, 2nd Bombay Pioneers (Marine Battalion).
21st Bombay Infantry (Marine Battalion)	122nd Rajputana Infantry	2nd Battalion, 119th Infantry (The Mooltan Regiment).	3rd Battalion, 6th Rajputana Rifles.
22nd Bombay Infantry	123rd Outram's Rifles	120th Rajputana Infantry	4th Battalion, 6th Rajputana Rifles (Outram's).
23rd Bombay Rifles	124th Duchess of Connaught's Own Baluchistan Infantry.	121st Pioneers	1st Battalion, 10th Baluch Regiment (Duchess of Connaught's Own).
24th (Duchess of Connaught's Own) Baluchistan Infantry.	125th Napier's Rifles	122nd Rajputana Infantry	10th Battalion, 10th Baluch Regiment.
25th Bombay Rifles	126th Baluchistan Infantry	123rd Outram's Rifles	5th Battalion, 6th Rajputana Rifles (Napier's).
26th Baluchistan Infantry.	127th Baluch Light Infantry	2nd Battalion, 123rd Outram's Rifles	2nd Battalion, 10th Baluch Regiment.
27th Baluch Light Infantry	127th Queen Mary's Own Baluch Light Infantry.	1st Battalion, 124th Duchess of Connaught's Baluchistan Infantry.	3rd Battalion, 10th Baluch Regiment (Queen Mary's Own).
		2nd Battalion, 124th Duchess of Connaught's Baluchistan Infantry.	
		1st Battalion, 125th Napier's Rifles	
		2nd Battalion, 125th Napier's Rifles	
		126th Baluchistan Infantry	
		127th Baluch Light Infantry	
		127th Queen Mary's Own Baluch Light Infantry.	
		2nd Battalion, 127th Queen Mary's Own Baluch Light Infantry.	

List of Indian Infantry and Pioneer Units, showing titles allotted in 1903 and 1922—*contd.*

Previous Titles.	Titles of 1903.		Titles during 1914-18.		Titles of 1922.	
28th Bombay Pioneers	128th Pioneers	128th Pioneers	1st Battalion, 128th Pioneers	3rd Battalion, 2nd Bombay Pioneers.		
29th (Duke of Connaught's Own) Baluch Infantry	129th Duke of Connaught's Own Baluchis	129th Duke of Connaught's Own Baluchis	2nd Battalion, 128th Pioneers 1st Battalion, 129th Duke of Connaught's Own Baluchis.	4th Battalion, 10th Baluch Regiment (Duke of Connaught's Own).		
30th Baluch Infantry	130th Baluchis	130th (King George's Own) Baluchis (Jacob's Rifles).	2nd Battalion, 129th Duke of Connaught's Own Baluchis. 130th (King George's Own) Baluchis (Jacob's Rifles).	5th Battalion, 10th Baluch Regiment (King George's Own) (Jacob's Rifles).		
		1st Battalion, 131st United Provinces Regiment.	1st Battalion, 131st United Provinces Regiment.			
		2nd Battalion, 131st United Provinces Regiment.	2nd Battalion, 131st United Provinces Regiment.			
		1st Battalion, 133rd Regiment	1st Battalion, 133rd Regiment			
		1st Battalion, 140th Patiala Infantry	1st Battalion, 140th Patiala Infantry			
		1st Battalion, 141st Bikanir Infantry	1st Battalion, 141st Bikanir Infantry			
		1st Battalion, 142nd Jodhpur Infantry	1st Battalion, 142nd Jodhpur Infantry			
		1st Battalion, 143rd Narsingh (Dholpur) Infantry.	1st Battalion, 143rd Narsingh (Dholpur) Infantry.			
		1st Battalion, 144th Bharatpur Infantry	1st Battalion, 144th Bharatpur Infantry			
		1st Battalion, 145th Alwar (Jai Paltan) Infantry.	1st Battalion, 145th Alwar (Jai Paltan) Infantry.			
		1st Battalion, 150th Indian Infantry	1st Battalion, 150th Indian Infantry			
		2nd Battalion, 150th Indian Infantry	2nd Battalion, 150th Indian Infantry			
		3rd Battalion, 150th Indian Infantry	3rd Battalion, 150th Indian Infantry			
		1st Battalion, 151st Sikh Infantry	1st Battalion, 151st Sikh Infantry			

....	2nd Battalion, 151st Indian Infantry	....
....	3rd Battalion, 151st Punjabi Rifles	....
....	1st Battalion, 152nd Punjabis	....
....	2nd Battalion, 152nd Punjabis	....
....	3rd Battalion, 152nd Punjabis	....
....	1st Battalion, 153rd Punjabis	....
....	2nd Battalion, 153rd Punjabis	....
....	3rd Battalion, 153rd Rifles	....
....	1st Battalion, 154th Indian Infantry	....
....	2nd Battalion, 154th Indian Infantry	....
....	3rd Battalion, 154th Indian Infantry	....
....	1st Battalion, 155th Indian Pioneers	....
....	2nd Battalion, 155th Indian Infantry	....
....	1st Battalion, 156th Indian Infantry	....

1st Battalion, 1st Gurkha Rifles.	1st Battalion, 1st Gurkha Rifles (The Malaun Regiment).	1st Battalion, 1st King George's Own Gurkha Rifles (The Malaun Regiment).
2nd Battalion, 1st Gurkha Rifles	2nd Battalion, 1st Gurkha Rifles (The Malaun Regiment).	2nd Battalion, 1st King George's Own Gurkha Rifles (The Malaun Regiment).
....		
1st Battalion, 2nd Gurkha Rifles (Prince of Wales' Own) (The Sirmoor Rifles).	1st Battalion, 2nd Prince of Wales' Own Gurkha Rifles (The Sirmoor Rifles).	1st Battalion, 2nd King Edward's Own Gurkha Rifles (The Sirmoor Rifles).
2nd Battalion, 2nd Gurkha Rifles (Prince of Wales' Own) (The Sirmoor Rifles).	2nd Battalion, 2nd Prince of Wales' Own Gurkha Rifles (The Sirmoor Rifles).	2nd Battalion, 2nd King Edward's Own Gurkha Rifles (The Sirmoor Rifles).
....		

Gurkhas.

List of Indian Infantry and Pioneer Units, showing titles allotted in 1903 and 1922—concl'd.

Previous Titles.	Titles of 1903.	Titles during 1914-18.	Titles of 1922.
1st Battalion, 3rd Gurkha Rifles	1st Battalion, 3rd Gurkha Rifles . .	1st Battalion, 3rd Queen Alexandra's Own Gurkha Rifles.	1st Battalion, 3rd Queen Alexandra's Own Gurkha Rifles.
2nd Battalion, 3rd Gurkha Rifles	2nd Battalion, 3rd Gurkha Rifles . .	2nd Battalion, 3rd Queen Alexandra's Own Gurkha Rifles.	2nd Battalion, 3rd Queen Alexandra's Own Gurkha Rifles.
....	....	3rd Battalion, 3rd Queen Alexandra's Own Gurkha Rifles.	....
....	....	4th Battalion, 3rd Queen Alexandra's Own Gurkha Rifles.	....
1st Battalion, 4th Gurkha Rifles	1st Battalion, 4th Gurkha Rifles . .	1st Battalion, 4th Gurkha Rifles . .	1st Battalion, 4th Gurkha Rifles.
2nd Battalion, 4th Gurkha Rifles	2nd Battalion, 4th Gurkha Rifles . .	2nd Battalion, 4th Gurkha Rifles . .	2nd Battalion, 4th Gurkha Rifles.
1st Battalion, 5th Gurkha Rifles	1st Battalion, 5th Gurkha Rifles . .	1st Battalion, 5th Gurkha Rifles (Frontier Force).	1st Battalion, 5th Royal Gurkha Rifles (Frontier Force).
2nd Battalion, 5th Gurkha Rifles	2nd Battalion, 5th Gurkha Rifles . .	2nd Battalion, 5th Gurkha Rifles (Frontier Force).	2nd Battalion, 5th Royal Gurkha Rifles (Frontier Force).
....	....	3rd Battalion, 5th Gurkha Rifles (Frontier Force).	....
42nd Gurkha Rifles	6th Gurkha Rifles	1st Battalion, 6th Gurkha Rifles . .	1st Battalion, 6th Gurkha Rifles.
....	2nd Battalion, 6th Gurkha Rifles (1904)	2nd Battalion, 6th Gurkha Rifles . .	2nd Battalion, 6th Gurkha Rifles.
....	....	3rd Battalion, 6th Gurkha Rifles . .	....
8th Gurkha Rifles	2nd Battalion, 10th Gurkha Rifles (till 1907).	1st Battalion, 7th Gurkha Rifles . .	1st Battalion, 7th Gurkha Rifles.
....	2nd Battalion, 7th Gurkha Rifles (1907).	2nd Battalion, 7th Gurkha Rifles . .	2nd Battalion, 7th Gurkha Rifles.
....	....	3rd Battalion, 7th Gurkha Rifles . .	....
44th Gurkha Rifles	8th Gurkha Rifles	1st Battalion, 8th Gurkha Rifles . .	1st Battalion 8th Gurkha Rifles.
43rd Gurkha Rifles	7th Gurkha Rifles	2nd Battalion, 8th Gurkha Rifles . .	2nd Battalion, 8th Gurkha Rifles.

9th Gurkha Rifles	....	....	3rd Battalion, 8th Gurkha Rifles .	....	1st Battalion, 9th Gurkha Rifles.
	.	.	1st Battalion, 9th Gurkha Rifles .	.	2nd Battalion, 9th Gurkha Rifles.
	....	....	2nd Battalion, 9th Gurkha Rifles .	.	....
	....	....	3rd Battalion, 9th Gurkha Rifles .	.	1st Battalion, 10th Gurkha Rifles.
10th Gurkha Rifles	.	.	1st Battalion, 10th Gurkha Rifle .	.	2nd Battalion, 10th Gurkha Rifles.
	....	....	2nd Battalion, 10th Gurkha Rifles	.	....
	....	....	1st Battalion, 11th Gurkha Rifles .	.	....
	....	....	2nd Battalion, 11th Gurkha Rifles.	.	....
	....	....	3rd Battalion, 11th Gurkha Rifles	.	....
	....	....	4th Battalion, 11th Gurkha Rifles	.	....

APPENDIX VI.

Strength of Combatant Troops of the Army in India, 15th June 1903.

APPENDIX VI

	BRITISH ARMY.			INDIAN ARMY.			TOTAL.		
	BRITISH.		Total.	BRITISH.		Total.	British Ranks.	Indian Ranks.	Grand Total Army in India.
	Officers.	Other Ranks.		Officers.	Other Ranks.				
Cavalry	263	5,793	6,056	543	..	24,311	6,599	24,311	30,910
Artillery	408	14,174*	17,140	47	..	3,057	14,629	5,615	20,244
Sappers and Miners	..	..	..	70	95*	4,712*	165	4,712	4,877
Infantry	1,667	52,212	53,879	1,606	..	107,449	55,485	107,449	162,934
TOTAL	2,338	72,179	77,075	2,266	95	139,529	76,878	142,087	218,965

* Approximate.

APPENDIX VII.

Actual Strength of Combatant Troops of the Indian Army, 1st August 1914.

	INDIAN ARMY.			
	BRITISH.		Indian Ranks.	Grand total Indian Army.
	Officers.	Other Ranks.		
Cavalry	560	..	24,476	25,036
Artillery	67	..	4,093*	4,160
Sappers and Miners	67	159	4,792	5,018
Signals	22	207	375	604
Infantry	1,845	..	118,760	120,605
TOTAL	2,561	366	152,496	155,423

* Excludes Indian Combatants of British Artillery.

Actual Strength of Combatant Troops of the Indian Army, 11th November 1918.

	INDIAN ARMY.			
	BRITISH.		Indian Ranks.	Grand total Indian Army.
	Officers.	Other Ranks.		
Cavalry	975	..	52,277	53,252
Artillery	166	..	10,469	10,635
Sappers and Miners	342	365	22,556	23,263
Signals	193	2,930	7,120	10,243
Infantry	5,422	..	470,669	476,091
TOTAL	7,098	3,295	563,091	573,484*

* Exclusive of Indian Combatants in British Artillery and British Machine Gun Companies.

APPENDIX VIII.

Actual Strength of Combatant Troops of the Army in India, 1st September 1923.

APPENDIX VIII

	BRITISH ARMY.				INDIAN ARMY.				TOTAL.	
	BRITISH.		Indian Ranks.	Total.	BRITISH.		Indian Ranks.	Total.	British Ranks.	Indian Ranks.
	Officers.	Other Ranks.			Officers.	Other Ranks.				
Cavalry	189	4,622	..	4,811	288	..	10,879	11,167	5,099	10,879
Artillery	559	10,823	12,386	23,768	Included in figures of British Army.				11,382	12,386
Tank Corps	59	945	..	1,004	..	..	..	..	1,004	..
Sappers and Miners	..	..	..	..	95	202	7,586	7,883	297	7,586
Indian Signal Corps	..	..	..	..	125	2,096	3,152	5,373	2,221	3,152
Infantry	1,158	43,357	1,826	46,341	1,588	..	102,890	104,478	46,103	104,716
TOTAL	1,965	59,747	14,212	75,924	2,096	2,298	124,507	128,901	66,106	138,719
										204,825

Grand
Total
Army in
India.

APPENDIX IX.

Organization of the Army in India in 1904.

I.—FIELD ARMY.

A.—Army Troops.

- 1* Battery and Ammunition Column Royal Horse Artillery.
- 2 Brigades Royal Field Artillery (36 18-pr. guns each).
- 1 Brigade Royal Field Artillery (18 4.5" Hows.).
- 3 Royal Field Artillery Brigade Ammunition Columns.
- 4 Heavy Batteries (16 4" guns).
- 2 Heavy Batteries (8 30-pr. guns).
- 1 Battalion Pioneers.
- and L. of C. units.

B.—9 Divisions.

Each Division consisting of—

(i) Divisional Troops :—

- Divisional Headquarter.
- 1 Indian Cavalry Regiment.
- 1 Royal Field Artillery Brigade (18 18-pr. guns).
- * 1 Mountain Artillery Brigade (12 10-pr. guns).
- 1 Divisional Ammunition Column.
- 1 Pioneer Battalion.
- 2 Companies Sappers and Miners.
- 5 Field Ambulances.

(ii) 3 Infantry Brigades :—

- Each Infantry Brigade consisting of—
- Headquarter.
- 1 British Battalion.
- 3 Indian Battalions.

C.—8 Cavalry Brigades.*

Each consisting of—

- † Headquarter.
- 1 British Cavalry Regiment.
- 2 Indian Cavalry Regiments.
- 1 Battery Royal Horse Artillery (6 13-pr. guns).
- 1 Cavalry Brigade Ammunition Column.
- 3 Sections Field Ambulances.

D.—Total of units allotted to Field Army.

- 8 British Cavalry Regiments.
- 25 Indian Cavalry Regiments.
- 9 Batteries Royal Horse Artillery.
- 12 Brigades Royal Field Artillery.
- 7 Mountain Artillery Brigades.
- 6 Heavy Batteries.
- 9 Divisional Ammunition Columns.
- 3 Royal Field Artillery Brigade Ammunition Columns.
- 9 Royal Horse Artillery Battery Ammunition Columns.
- 18 Companies Sappers and Miners.

* 2 of the 9 Divisions had no Mountain Artillery Brigades.

† 2 Brigades had no headquarters sanctioned in peace.

APPENDIX IX—(contd.)

27 Battalions of British Infantry.
 81 Battalions of Indian Infantry.
 10 Pioneer Battalions.
 Medical and Line of Communications Units.
 Total fighting troops—152,000.

TOTAL GUNS.											
4"	.	.	.	.	.	.	.	.	.	.	16
30-prs.	.	.	.	.	.	.	.	.	.	.	8
4.5" Hows.	.	.	.	.	.	.	.	.	.	.	18
18-prs.	.	.	.	.	.	.	.	.	.	.	198
13-prs.	.	.	.	.	.	.	.	.	.	.	54
10-prs.	.	.	.	.	.	.	.	.	.	.	84
											378
Total Machine Guns	.	.	.	.	.	.	.	.	.	.	306

II.—INTERNAL SECURITY.

N.B.—Under this heading were then included troops allotted to Aden, Persian Gulf, etc., and also the 3 Independent Brigades now allotted to the Covering Force.

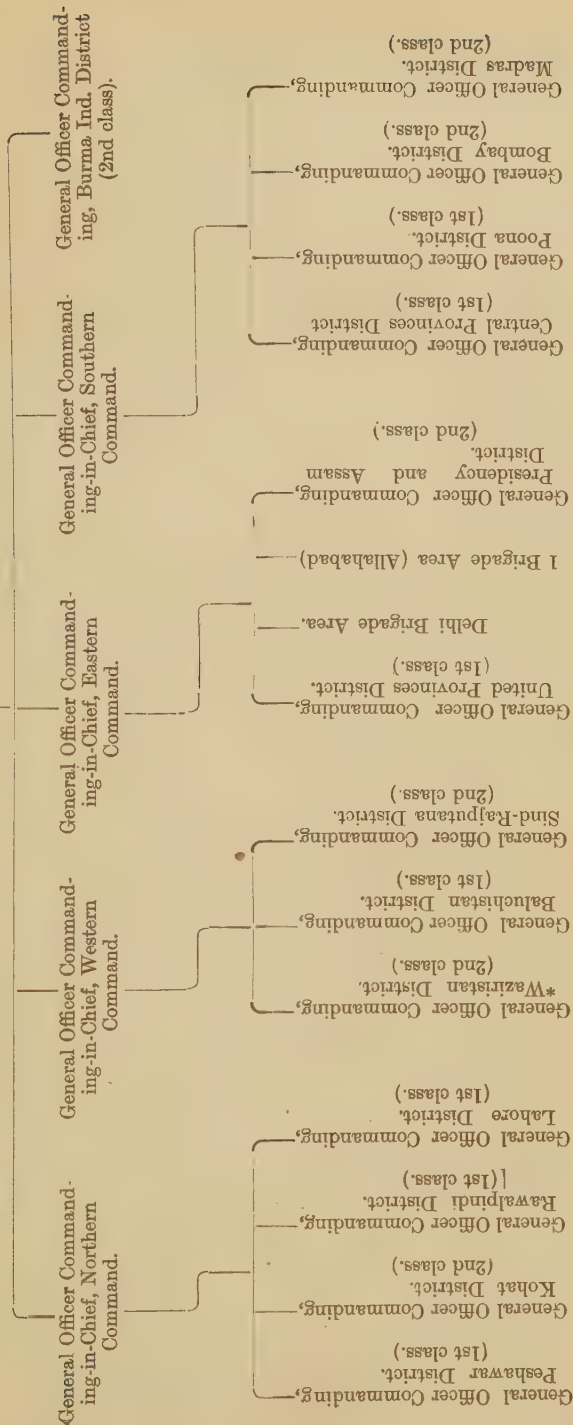
British Cavalry Regiments	.	.	.	.	.	1
Indian Cavalry Regiments	.	.	.	.	.	14
Batteries Royal Horse Artillery	.	.	.	.	.	2 (12 13-pr. guns).
Batteries Royal Field Artillery	.	.	.	.	.	9 (54 18-pr. „)
Mountain Batteries	.	.	.	.	.	6 (36 10-pr. „)
Companies Royal Garrison Artillery	.	.	.	.	.	21
British Infantry Battalions	.	.	.	.	.	25
Indian Infantry Battalions	.	.	.	.	.	45
Pioneer Battalions	.	.	.	.	.	2
Total fighting troops	.	.	.	.	.	82,000
Mobile guns :—						
54	.	.	.	.	.	18-prs.
12	.	.	.	.	.	13-prs.
36	.	.	.	.	.	10-prs.
						102
Machine guns	.	.	.	.	.	115

APPENDIX X.

Organization of the Army in India in 1923.

PLAN SHOWING CHAIN OF COMMAND.

THE COMMANDER-IN-CHIEF.



* Temporarily a 1st class District under Army Headquarters.

APPENDIX XI.

Table to illustrate the Relative Efficiency of Railway, Mechanical and Animal Transport as a means of maintaining an Army.

NOTES :—(i) The figures are approximate only.

(ii) The force to be maintained is taken as 4 Divisions; for which the daily lift required is 900 Tons in the scale —

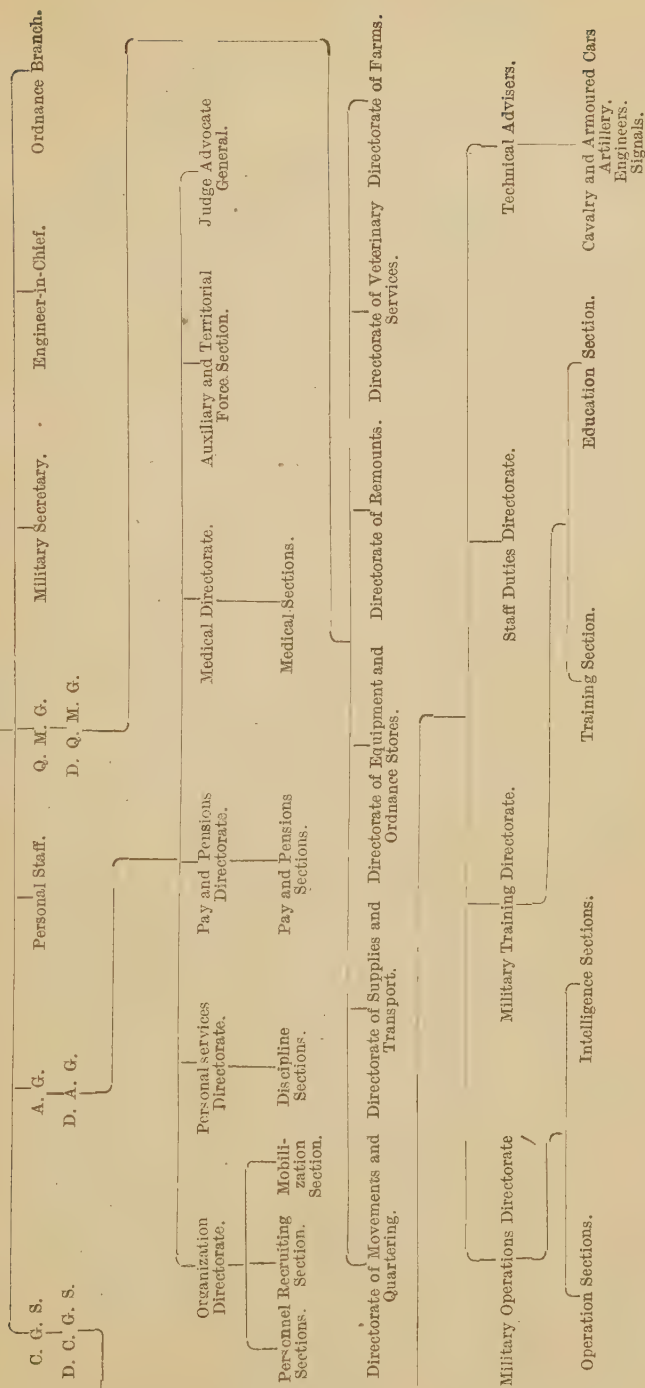
Men	Full rations.
Animals	Half „
Ammunition.	One-eighth echelon.
R. E. stores in proportion.	

TYPE.	NO. REQUIRED DAILY TO LIFT 900 TONS.	DAILY RADIUS. (Miles).	ROAD SPACE. (Miles).	REMARKS.
(1) Broad Gauge Trains	1	—	—	Rate of construction beyond rail-head, 1 mile per day (maximum).
(2) Light Railway Trains	3	—	—	Rate of construction beyond rail-head, 2 miles per day.
(3) 3-ton Lorries . . .	300	30	6	The passage of 50 heavy lorries completely destroys even a good unmetalled road.
(4) 3-Cwt. Lorries (pneumatic cord tyres).	600	40	16	A section of good unmetalled road will carry this traffic for a week.
(5) Ford Vans . . .	2,500	50	42	Length of column excessive. Useful load small. Very extravagant in personnel, petrol, etc. <i>But</i> largely independent of roads in normal country.
(6) A. T. Carts . . .	3,150	†10	13	† Thus, if the force is operating more than 10 miles from railhead, a second complete echelon of carts is required, and so on. If the round trip is impracticable at any stage, the number of carts working on that stage must be doubled.
(7) Camels	45,000	10 (double banked) 126. (single file).	63	The same remarks apply as in (6) above. In addition each stage added to the line reduces the useful load of camels working in the preceding stages, and increases the numbers required proportionately.

APPENDIX XII.

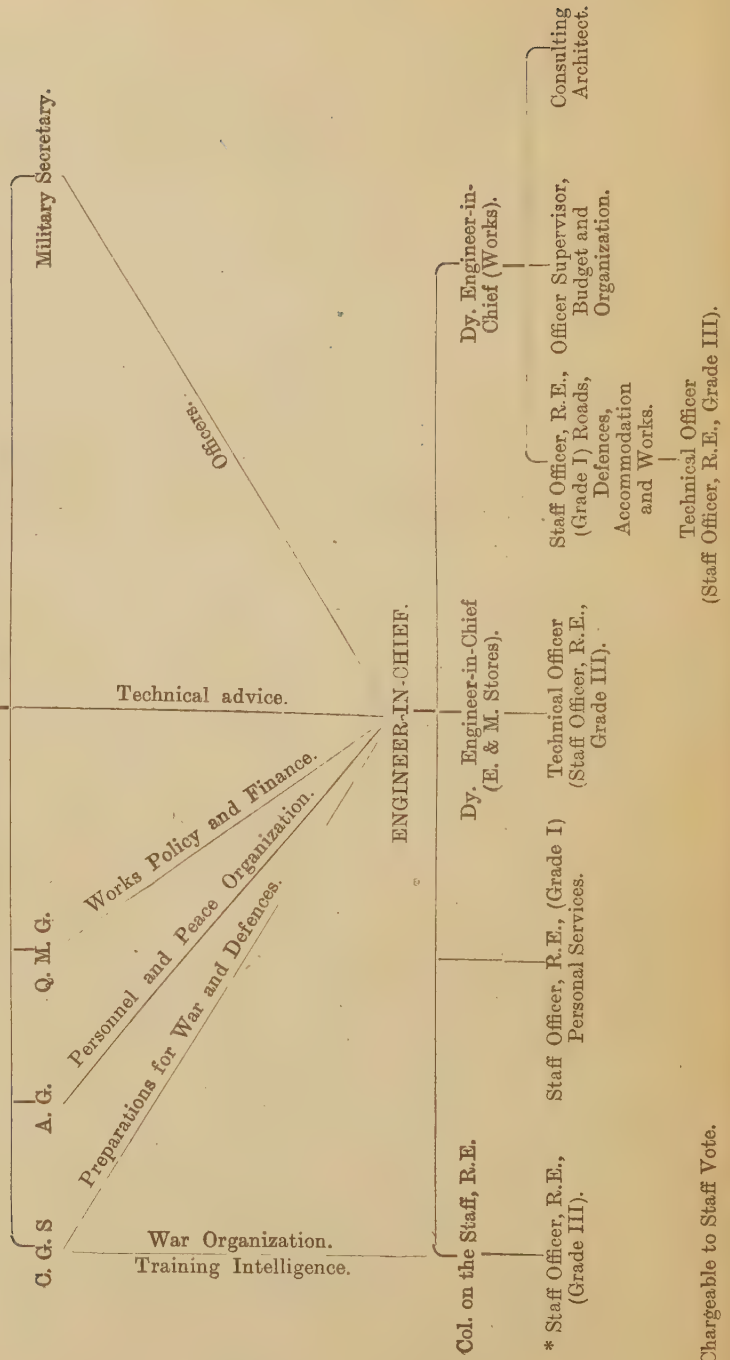
Organization of Army Headquarters in India, 1923.

HIS EXCELLENCY THE COMMANDER-IN-CHIEF.



APPENDIX XIII.

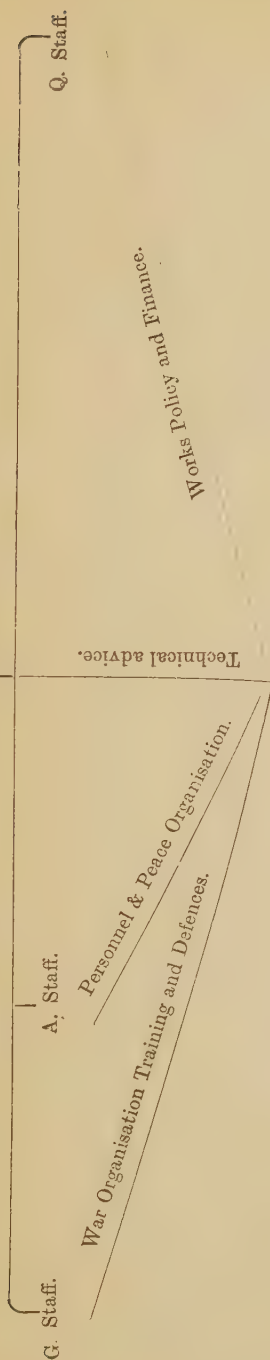
Engineer Organization at Army Headquarters.
HIS EXCELLENCY THE COMMANDER-IN-CHIEF.



APPENDIX XIV.

Engineer Organization at Command Headquarters (except Northern Command).

G. O. C.-IN-CHIEF.



CHIEF ENGINEER.

* Staff Officer, R. E.
(Grade II)
(Military Engineering.)

Staff Officer, R. E.
(Grade II)
(Electrical and Mechanical
Services.)†

Deputy Chief Engineer (Works)
Staff Officer, R. E. (Grade I.)

(In Western Command only
2nd Grade required.)†

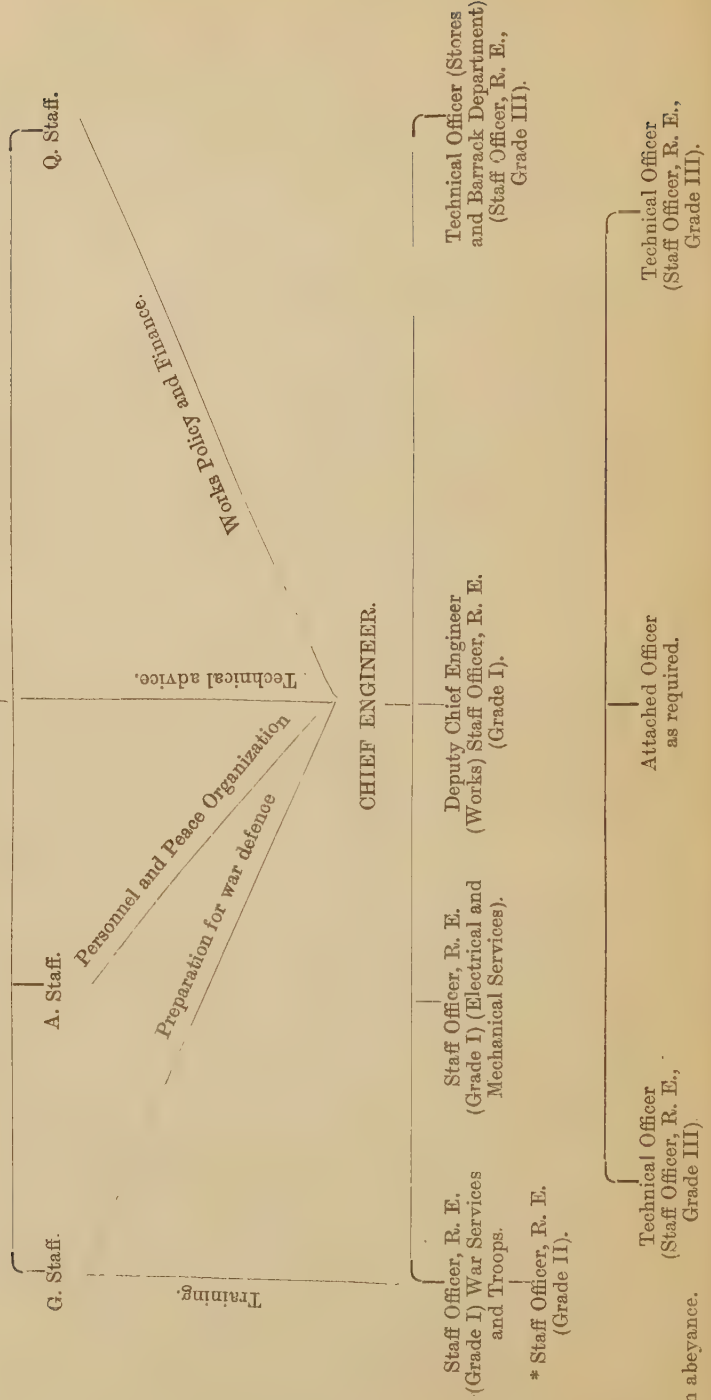
Attached Officers as may be
required.

* In abeyance.

† Paid as an A. C. R. E.

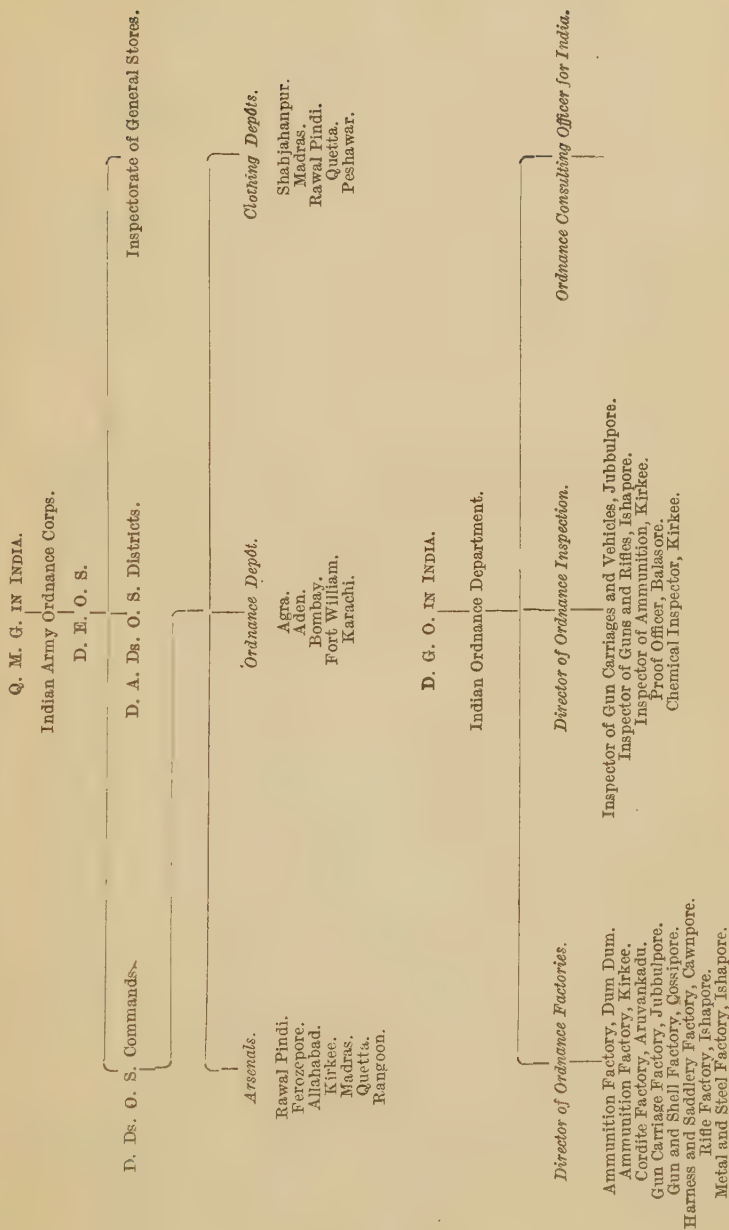
APPENDIX XV. Engineer Organization at Northern Command Headquarters.

G. O. C.-IN-CHIEF.



APPENDIX XVI.

Diagram showing organization of the Ordnance Services in India.



APPENDIX XVII.

Comparison between Establishments of fighting services in 1914 and 1923-24.

Units	1914.				1923-24.				REMARKS.	
	British Officers.	British O. Rs.	Indian ranks.	Followers.	British Officers.	British O. Rs.	Indian ranks.	FOLLOWERS.		
								Class I.		Class II.
British Cavalry Regiment	27	598	..	225	27	571	..	52	216	
" Infantry Battalion	28	1,004	..	37	28	882	42	25	48	
Artillery.										
Royal Horse Artillery Brigade Headquarters	2	4	..	2	3	4	..	..	1	
" " Battery (H. E.)	5	175	15	121	6	171	55	13	68	
" " " (L. E.)	5	152	8	95	..	..	..	..	..	
" " " Ammunition Column	1	18	56	61	1	18	59	8	31	
Royal Field Artillery Brigade Headquarters	2	5	..	2	3	12	7	4	2	
" " " (L. E.)	2	3	..	..	3	12	7	4	2	
" " " Reinforce-ment.	..	..	..	..	2	6	3	3	1	
Royal Field Artillery Battery (H. E.)	5	174	12	103	6	161	55	13	55	
" " " (L. E.)	5	148	7	79	6	141	35	13	44	
" " " Reinforcement	..	..	..	..	3	76	35	12	36	
" " " (5" Howitzer)	5	180	20	101	..	..	..	..	..	
Divisional Ammunition Column	..	..	..	..	7	50	333	28	131	
Royal Field Artillery Brigade Ammunition Column	4	64	190	204	..	..	..	..	..	

APPENDIX XVII—(contd.)

Royal Field Artillery Brigade Ammunition Column (Howitzer).	4	52	112	145	..	..	..	..	..	..
Royal Field Artillery Brigade Ammunition Column (Howitzer) (H. E.).	..	..	..	..	3	46	165	11	73	..
Royal Field Artillery Brigade Ammunition Column (Howitzer) (L. E.).	..	..	..	..	..	..	..	..	..	..
British Pack Artillery Brigade Headquarters	3	5	..	1	..	..	..	..	..	..
Indian Pack Artillery Brigade Headquarters	1	..	..	..	3	6	10	4	..	..
" " Battery (3-7" Howitzer).	..	..	..	..	4	1	284	25	..	..
British Pack Battery (3-7" Howitzer).	..	..	..	..	5	115	176	21	9	..
Indian Pack Battery (2-75" Guns)	..	..	..	..	4	1	255	25	..	..
British Mountain Battery (2-75" Guns)	5	129	195	26	..	..	..	..	..	..
Indian Mountain Battery (10-pr. Guns)	5	..	323	70	..	..	..	..	..	..
Chitral Pack Artillery Section	..	..	..	..	2	..	123	12	..	..
Medium Artillery Brigade Headquarters	..	..	..	..	3	10	3	..	2	..
6" Howitzer or 60-pr. (Horse Drawn Battery)	..	..	..	..	6	131	83	13	51	..
6" Howitzer or 60-pr. (Tractor Drawn Battery)	..	..	..	..	6	126	14	12	13	..
Heavy Artillery Brigade Headquarters	1	3	..	..	..	..	..	..	..	..
" Battery 4" or 30-pr.	5	91	104	78	..	..	..	..	..	..
" Battery 5"	5	89	110	30	..	..	..	..	..	..
Coast Defence Artillery Brigade Headquarters	2	7	..	..	4	12	..	..	..	..
" " Company Royal Garrison Artillery	5	110	..	14	5	102	..	..	6	..
Indian Coast Artillery	..	..	379	..	3	..	289	15	..	..
6" Howitzer or 60-pr. (T. D.) (allotted to I. S. duties)	..	..	..	..	6	125	..	..	13	..
Inland Company Royal Garrison Artillery	5	140	..	14	..	..	..	..	..	..
Fort Arment Inland	..	23	..	171	..	20	..	104	48	..
Frontier Garrison Artillery	3	..	275	16	8	..	344	49	..	..

Comparison between Establishments of fighting services in 1914 and 1923-24—contd.

Units.	1914.				1923-24.				REMARKS.	
	British Officers.	British O. Rs.	Indian ranks.	Followers.	British Officers.	British O. Rs.	Indian ranks.	FOLLOWERS.		
								Class I.		Class II.
<i>Artillery—contd.</i>										
Royal Artillery Training Centre	..	..	..	..	11	14	497	..	81	
Pack Artillery Training Centre	..	..	..	..	11	9	719	4	61	
Royal Artillery Boys' Depot	..	17	..	..	..	51	..	..	2	
" " Miscellaneous	7	..	..	..	..	..	..	..	..	
<i>Tank Corps.</i>										
Tank Corps Headquarters	..	..	..	..	3	3	..	..	..	
Armoured Car Companies	..	..	..	..	12	144	..	37	4	
<i>Sappers and Miners.</i>										
Headquarters and Depôts of Corps	6	8	186	..	10	15	456	..	24	
Field Company	2	2	191	..	2	3	228	14	..	
" Troop	..	..	..	..	2	3	93	8	23	
Army Troops Company	..	..	..	..	2	4	119	7	..	
Railway Company	1.5	1.5	196	..	2	3	169	15	..	
Divisional Headquarters Company	..	..	..	..	1	2	35	11	..	
Bridging Train	..	..	10	..	2	3	255	14	..	
Printing Section	..	2	4	..	..	2	6	8	..	
Photo-Litho Section	..	2	4	..	..	2	4	..	..	

APPENDIX XVII—(contd.)

Defence Light Section	1	13	24	7	1	13	24	..	7
Chitral Section.	..	..	..	..	1	1	63	4	..
<i>Signals.</i>									
Divisional Signal Company	5	44	88	11	..	..	..	..	..
Wireless Signal Company	1	10	..	..	..	..	..	..	..
Corps Line Signal Company	..	..	..	..	4	46	17	10	2
Medium Artillery Brigade Signal Section	..	..	..	..	1	21	2	3	..
Construction Section	..	..	..	..	1	13	30	4	..
Cable Section	..	..	..	..	1	8	31	4	5
Corps Wireless Signals, Company "B"	..	..	..	..	9	17	9	38	5
" " " " "A"	..	..	..	..	6	17	9	23	4
Wireless Training Section	..	..	..	..	..	22	..	..	..
Light Motor Section Wireless	..	..	..	..	..	17	..	..	..
Pack Section Wireless	..	..	..	..	..	19	19	..	3
Divisional Signal Unit (H. E.)	..	..	..	..	11	162	298	36	9
" " " (L. E.)	..	..	..	..	10	93	160	24	6
Field Artillery Brigade Signal Section.	..	..	..	..	1	16	5	4	5
Pack Artillery Brigade Signal Section	..	..	..	..	..	7	11	4	1
Cavalry Brigade Signal Troop (H. E.)	..	..	..	..	1	24	30	6	15
" " " " (L. E.)	..	..	..	..	1	14	21	6	10
No. 1 Signal Park	..	..	..	..	..	5	4	..	..
No. 2 Signal Park	..	..	..	..	..	3	4	..	..
Army Signal School	..	..	..	..	6	15	20	..	24
L. of C. Signal Battalion	..	..	..	..	1	1	5	..	..
Signal Training Centre and Depot	..	..	..	..	27	3	566	..	66

Comparison between Establishments of fighting services in 1914 and 1923-24—concl'd.

Units.	1914.				1923-24.				REMARKS.	
	British Officers.	British O. Rs.	Indian ranks.	Followers.	British Officers.	British O. Rs.	Indian ranks.	FOLLOWERS.		
								Class I.		Class II.
<i>Signals—contd.</i>										
Signal Workshop Section	..	..	..	..	..	12	14	3	..	
Indian Cavalry Regiment	14	..	620	317	14	..	522	38	168	
„ Infantry Battalion	13	..	865	17	{ (a) 12 (b) 9	..	773	(a) 50 (b) 35		
„ Pioneer Battalion	14	..	899	22	{ (a) 12 (b) 9	..	677	(a) 38 (b) 27		
(a) Active Battalion (b) Training Battalion.										

(a) Active Battalion
(b) Training Battalion.

APPENDIX XVIII.

Comparison between fighting and administrative services, 1913-14 and 1922-23.

	1913-14.				1922-23.				Total.	
	British Officers.	British Other Ranks	Indian Officers and Indian Other Ranks.	Others.	Total.	British Officers.	British Other Ranks.	Indian Officers and Indian Other Ranks.		Others.
(a) Fighting Services (including Royal Air Force).	4,720	71,486	153,171	29,011	258,388	4,467	66,078	144,617	20,490	235,652
(b) Administrative Services .	1,708	2,263	25,688	19,202	48,861	2,365	5,089	25,893	38,557	71,904
Ratio (a) to (b)	..	..	..	..	5:1	..	..	..	..	3:1

Percentage of Administrative Services to Fighting Services 1913-14

Ditto 1922-23 19 per cent.

ditto 30 "

During the war the proportion it was found necessary to maintain in the field was 60 fighting services to 40 administrative services; the latter thus constituting 60 per cent. of the former.

APPENDIX XIX.

Main heads of Indian Military Budget.

ARMY.

Part A.—Standing Army.

I. MAINTENANCE OF THE STANDING ARMY.

Fighting services.
Administrative services (1).
Miscellaneous units (2).
Miscellaneous charges (3).
Payments in England (4).

II. COST OF EDUCATIONAL ETC. ESTABLISHMENTS AND WORKING EXPENSES OF HOSPITALS, DEPÔTS ETC.

Educational and instructional establishments.
Army education.
Working expenses of hospitals.
Working expenses of store depôts etc. (5)
Working expenses of manufacturing establishments (6).
Inspection of stores.
Military accounts offices.
Ecclesiastical establishments.
Administration of cantonments.
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(2) Viceroy's Bodyguard and Band, Nepal escort, etc.

(3) Unattached List and unemployed officers, etc.

(4) Capitation payments to War Office for cost of recruitment and training of British personnel required by India as annual reliefs etc., leave allowances, marriage allowances of British soldiers, etc.

(5) Arsenals and ordnance depôts, clothing and boot depôts, supply depôts, medical store depôts, veterinary hospitals, remount depôts and breeding operations, central mechanical transport stores depôt.

(6) Bakeries, butcheries, grass farms, dairy farms, army clothing factories, army ordnance factories, base mechanical transport workshops.

(7) Recruiting staff, hill sanatoria and depôts, Indian Army Service Corps record office, veterinary record office.

(8) Personal staff of Governor-General, garrison quartermasters, rest camps, etc.

(9) Stores of various classes and animals.

(10) Expenditure connected with operations on the frontier and other special measures connected with it, demobilization of surplus troops etc.

(11) General charges connected with relief movements of troops, etc.

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APPENDIX XX.

Succession of Commanders-in-Chief "of India."

Name.	Assumed Command.
1. Major Stringer Lawrence	January 1748.
2. Colonel John Adlerscron	1754.
3. Colonel Robert Clive	December 1756 (And Governor).
4. Major John Caillaud	25th February 1760.
5. Major John Carnac	31st December 1760.
6. Lieut.-Colonel Eyre Coote	April 1761.
7. Major Thomas Adams	1763.
8. Major John Carnac	January 1764.
9. Major Hector Munro	July 1764.
10. Brigadier-General John Carnac	January 1765.
11. Major-General Robert Lord Clive	April 1765 (And Governor).
12. Colonel Richard Smith	29th January 1767.
13. Brigadier-General Sir Robert Barker	24th March 1770.
14. Colonel Alexander Chapman	18th January 1774.
15. Lieut.-General Sir John Clavering, K.B.	2nd November 1774.
16. Lieut.-General Sir Eyre Coote, K.B.	25th March 1779.
17. Lieut.-General Robert Sloper	21st July 1785.
18. Lieut.-General Charles Earl Cornwallis, K.G.	12th September 1786 (And Governor-General).
19. Major-General Sir Robert Abercromby, K.B.	28th October 1793.
20. Lieut.-General Sir Alured Clarke, K.B.	16th March 1797.
21. Lieut.-General Gerard Lake (afterwards Lord Lake).	13th March 1801.
22. General Charles Marquis Cornwallis, K.G.	30th July 1805 (And Governor-General).
23. General Gerard Lord Lake	5th October 1805.
24. Lieut.-General George Hewitt	17th October 1807.
25. Lieut.-General Sir George Nugent	14th January 1812.
26. General Francis, Earl of Moira (afterwards Marquis of Hastings).	4th October 1813 (And Governor-General).
27. Lieut.-General the Hon'ble Sir Edward Paget, G.C.B.	13th January 1823.
28. General Shapleton, Lord Combermere, G.C.B.	7th October 1825.
29. General George, Earl of Dalhousie, G.C.B.	1st January 1830.
30. General Sir Edward Barnes, G.C.B.	10th January 1832.
31. General Lord William H. C. Bentinck, G.C.B.	15th October 1833 (And Governor-General).
32. Lieut.-General the Hon'ble Sir Henry Fane, G.C.B.	5th September 1835.
33. Major-General Sir Jasper Nicolls, K.C.B.	7th December 1839.
34. General Sir Hugh Gough, Bart, G.C.B. (afterwards Lord Gough).	8th August 1843.
35. General Sir Charles James Napier, G.C.B.	7th May 1849.
36. General Sir William Maynard Gomm, K.C.B.	6th December 1850.
37. General the Hon'ble George Anson	23rd January 1856.
38. Lieut.-General Sir Patrick Grant, K.C.B.	17th June 1857 (Officiating).
39. General Sir Colin Campbell, G.C.B. (afterwards Lord Clyde).	13th August 1857.
40. General Sir Hugh H. Rose, G.C.B.	4th June 1860.
41. General Sir William Rose Mansfield, K.C.B.	23rd March 1865.

Succession of Commanders-in-Chief "of India"—contd.

Name.	Assumed Command.
42. General Lord Napier of Magdala, G.C.B., G.C.S.I.	9th April 1870.
43. General Sir Fred. P. Haines, K.C.B.	10th April 1876.
44. General Sir Donald M. Stewart, G.C.B., C.I.E.	8th April 1881.
45. General Sir Fred. S. Roberts, V.C., G.C.B., C.I.E.	28th November 1885.
46. General Sir Geo. S. White, V.C., G.C.I.E., K.C.B.	8th April 1893.
47. Lieut.-General Sir Charles Edward Nairne, K.C.B.	20th March 1898 (Provisional).
48. General Sir W. S. A. Lockhart, G.C.B., K.C.S.I.	4th November 1898.
49. General Sir A. P. Palmer, K.C.B.	19th March 1900.
50. General Viscount Kitchener of Khartoum, G.C.B., O.M., G.C.M.G.	23th November 1902.
51. General Sir O'Moore Creagh, V. C., G. C. B.	10th September 1909.
52. General Sir B. Duff, G.C.B., G.C.S.I., K.C.V.O., C.I.E.	8th March 1914.
53. General Sir C. C. Monro, G. C. S. I., G.C.M.G., K.C.B.	1st October 1916.
54. General Lord Rawlinson of Trent, G.C.B., G.C.V.O., K.C.M.G., A.-D.-C.	21st November 1920.

55 Field Marshall Sir William Birdwood	1912
56 Field Marshall Sir William Chetwode	1913
57 General Sir Robert Carruthers	1914

APPENDIX XXI.

Names of Officers holding the Principal Staff and Secretariat Appointments in the Army Administration during the period of reconstruction.

Chief of the General Staff . . .	General Sir C. W. Jacob, K.C.B., K.C.S.I., K.C.M.G. 1920-1923. Lieutenant-General Sir J. S. M. Shea, K.C.B., K.C.M.G., D.S.O. (Offg. 1922.)
Adjutant-General . . .	General Sir H. Hudson, K.C.B., K.C.I.E. 1920. Lieutenant-General Sir W. S. Delamain, K.C.B., K.C.M.G., D.S.O. 1920-1923. Lieutenant-General Sir G. de S. Barrow, K.C.B., K.C.M.G. 1923.
Quartermaster-General. . .	Lieutenant-General Sir G. F. MacMunn, K.C.B., K.C.S.I., D.S.O. 1920-1923.
Secretary, Army Department . . .	Sir G. Fell, K.C.I.E. 1920-1922. Mr. E. Burdon, C.I.E. 1922-1923.
Financial Adviser . . .	Mr. E. Burdon, C.I.E. 1920-1922. Sir B. N. Mitra, K.C.I.E., C.B.E. 1922-1923.
Deputy Chief of the General Staff	Major-General Sir A. A. Montgomery, K.C.M.G., C.B. 1920-1922. Major-General G. N. Cory, C.B., D.S.O. 1922-1923.
Deputy Adjutant-General . . .	Major-General H. F. Cooke, C.B., C.S.I., D.S.O. 1921-1922. Major-General G. N. Cory, C.B., D.S.O. 1921-1922. Major-General H. O. Parr, C.B., C.M.G. 1922-1923.
Deputy Quartermaster-General . . .	Major-General C. W. G. Richardson, C.B., C.S.I. 1920-1921. Major-General Sir H. C. Holman, K.C.B., C.M.G., D.S.O. 1921-1923.
Director of Military Operations . . .	Brigadier-General W. W. Pitt-Taylor, C.B., C.M.G., D.S.O. 1920-1923.
Director of Staff Duties . . .	Brigadier-General K. Wigram, C.B., C.S.I., C.B.E., D.S.O. 1920-1921. Colonel C. R. E. Charles, C.B., C.M.G., D.S.O. 1921-1923.
Director of Military Training . . .	Brigadier-General F. J. Marshall, C.B., C.M.G., D.S.O. 1920-1923.
Director of Organization . . .	Major-General H. F. Cooke, C.B., C.S.I., D.S.O. 1920-1921. Colonel J. Whitehead, C.M.G., D.S.O. 1921-1923.
Director of Personal Services . . .	Major-General L. N. Younghusband, C.B., C.M.G. 1920-1921. Colonel J. Whitehead, C.M.G., D.S.O. 1921. Major-General G. N. Cory, C.B., D.S.O. 1921-1922. Major-General H. O. Parr, C.B., C.M.G. 1922-1923.
Director of Movements and Quarterings. . .	Brigadier-General J. Charteris, C.M.G., D.S.O. 1920-1921. Colonel Sir P. O. Hambro, K.B.E., C.B., C.M.G. 1921-1923.
Director of Medical Services . . .	Lieutenant-General Sir C. H. Burtchaell, K.C.B., C.M.G. 1920-1923.
Director of Auxiliary and Territorial Force. . .	Colonel H. R. Nevill, C.I.E., O.B.E. 1921-1923.
Director of Equipment and Ordnance Stores. . .	Major-General Sir H. W. Perry, K.C.M.G., C.B., C.S.I. 1920. Brigadier-General P. A. Bainbridge, C.B., C.M.G. 1920-1922. Colonel H. W. Bowen, C.I.E., D.S.O. 1922-1923.

Names of Officers holding the Principal Staff and Secretariat Appointments in the Army Administration during the period of reconstruction—contd.

Director of Remounts	Brigadier-General T. G. Peacocke, C.I.E. 1920-1922. Major-General W. B. James, C.B., C.I.E., M.V.O. 1922-1923.
Director of Veterinary Services	Major-General Sir J. Moore, K.C.M.G., C.B. 1920-1921. Colonel H. T. Sawyer, C.B., D.S.O. 1921-1923.
Director of Supply and Transport	Major-General R. E. Vaughan, C.B. 1920. Colonel H. A. P. Lindsay, C.M.G., C.B.E. 1920-1921. Major-General F. M. Wilson, C.B., C.M.G., 1921-1923.
Director-General of Ordnance	Major-General L. R. Kenyon, C.B. 1920-1923.
Director-General of Military Works	Major-General J. C. Rimington, C.B., C.S.I. 1920-1921. Major-General Sir E. H. de V. Atkinson, K.B.E. C.B., C.M.G., C.I.E. 1921-1923.

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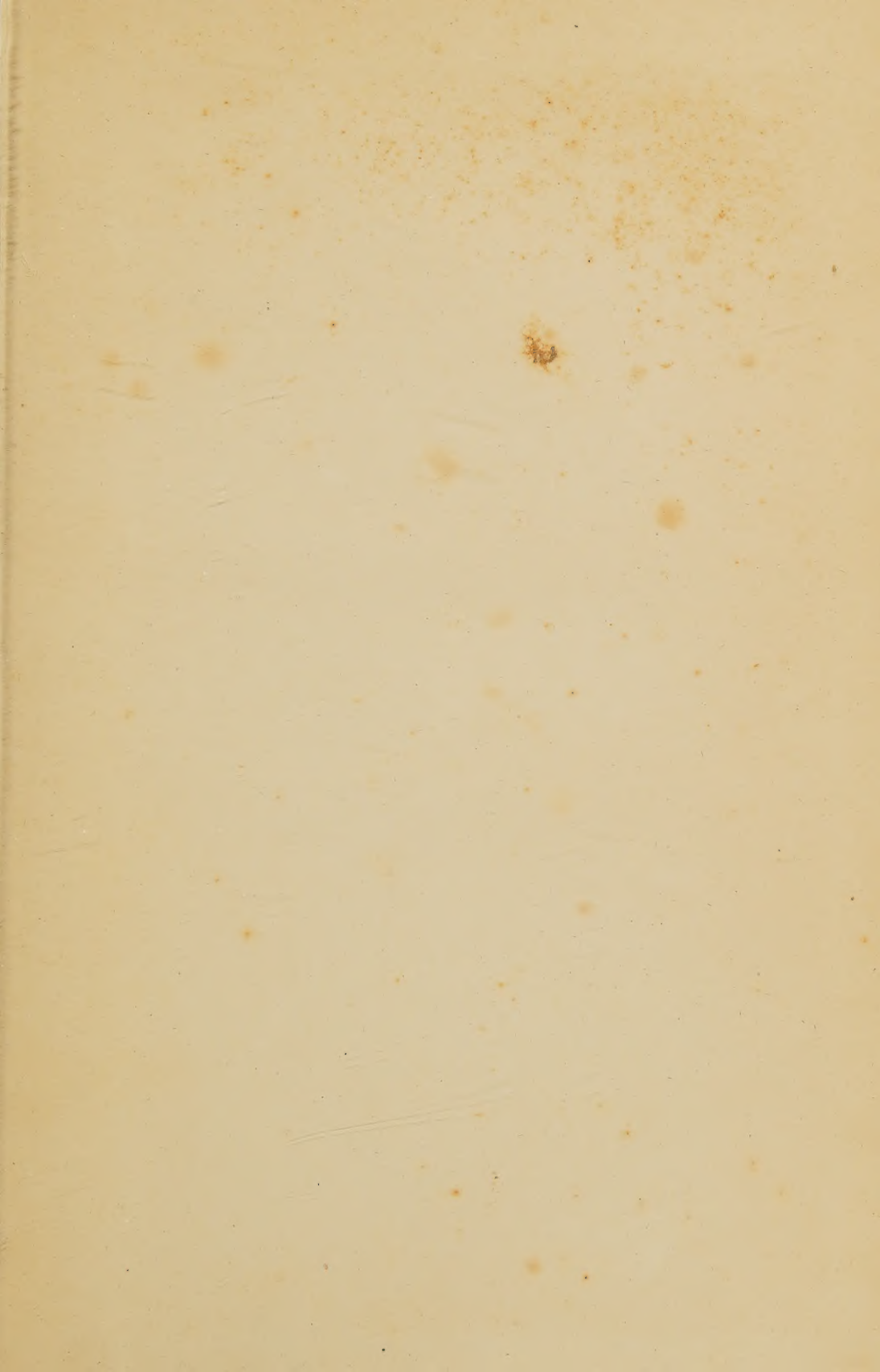
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